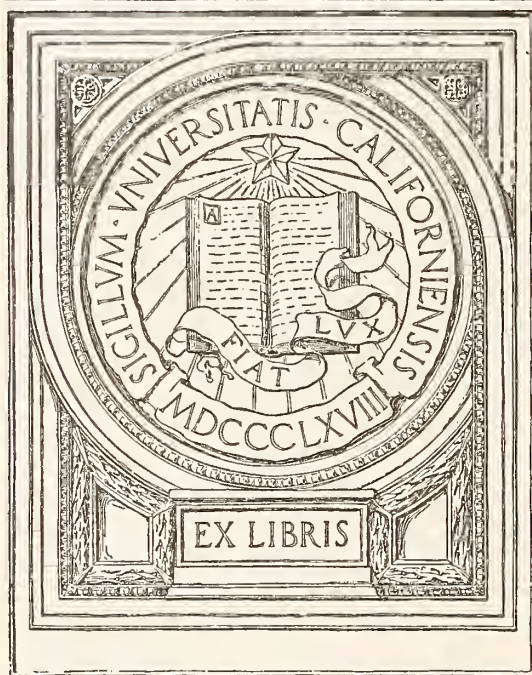
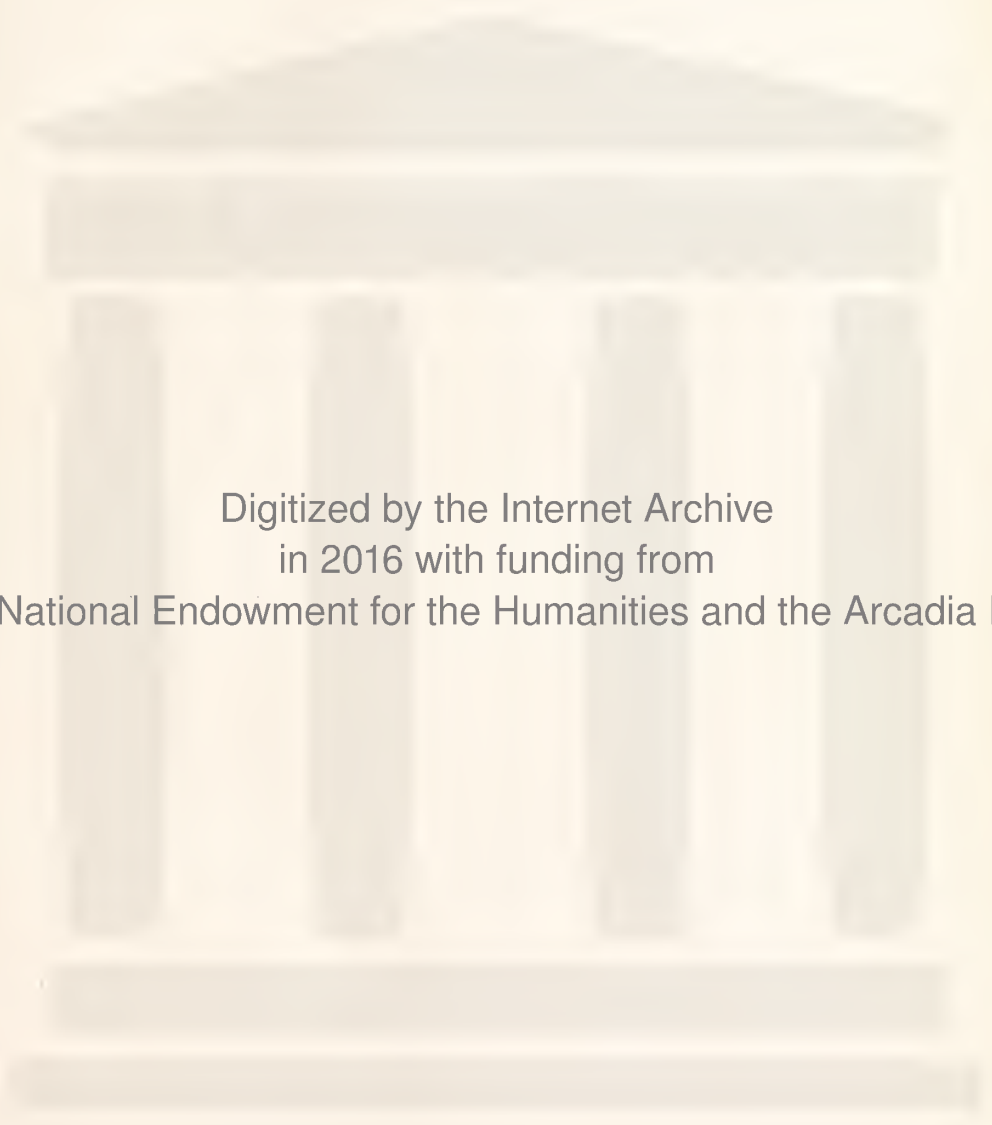


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EDITOR

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No. 1

ORIGINAL ARTICLES

"THE DOCTOR'S LOG"

WILLIAM J. STAPLETON, JR., M. D.

DETROIT, MICHIGAN

"Convictions and certainties are too often the concomitants of ignorance. If travel brings a conviction of human diversity, it also brings an equally strong conviction of human unity. It inculcates tolerance and shows what are the limits of possible toleration. Convinced by practical experience of man's diversity the traveller will not be tempted to cling to his own inherited national standard as though it were necessarily the only true and unperturbed one. He will compare standards and he will search for what is common to all."

Understanding diversity, and allowing for it, he will tolerate, but not without limit."

—Aldous Huxley.

"A chiel's amang you taking notes and faith he'll print it."

—Burns.

AUSTRIA

These notes were started in the "Stube" of my old friend Herr Hugo Haas at his home called "Traunmuhle" in Syria, Salzkammergut, Austria and I am finishing them on the steamer homeward bound. The word "Salzkammergut" means "salt mine region." I wish it were possible for me to describe adequately this beautiful country with its mountains covered with green Christmas trees, the sky with its ever changing clouds, and the people in their national costumes who greet you in the road with "Gruss Gott"—God's Blessing. For the tired traveller there is no land that is quite so soothing. Comparatively few Americans come here, yet it is only eight hours from Vienna and six from Munich. Like our own lake regions the Salzkammergut is a goitre region. However the use of iodine salt is showing fav-

orable results here as elsewhere. Nowhere have I seen such large goitres as in this region especially among those past middle age. Apparently the type common here does not affect the people adversely as they carry heavy loads and climb steep paths with ease. The government controls the salt industry as well as the railroads, posts, telephone, telegraph and sale of tobacco.

Austria has much of interest from a medical standpoint not only on account of Vienna, of which more later; nor account of history of goitre (there are still a few of the old goitre houses left) but because of its many springs the water of which is used in the treatment of diseases such as rheumatism in all its forms, skin diseases, female diseases. Such towns as Bad-Aussee, Bad-Gastien, Bad-Ische, Bad-Ischl, seat of the hunting and summer home of the late Emperor Frances Joseph, Alt-Aussee—the region round about Salzburg all are satisfactory places to take the various cures at reasonable prices.

In the little Spitalkirche or hospital church at Bad-Aussee is an old altar piece from the year 1449. The rest of the building is now used as a poor house. Of interest are the signs in the town Gasthaus zum Kaiser von Osterreich, the drug store with the name Apotek Goldner Adler, Weinstube, where only wine is sold, with its pictures of hunters and its walls decorated with the antlers of the deer and mountain goat. In the square is a monument with an inscription in German which explains itself. Translated it reads:

"O good is God." He is eternally prized and Him we honor with thankfulness and erect this pillar; He saved us from the plague by his mercy in the year 1679."

One enjoys a visit to Austria though even now reduced to a mere shadow of her former greatness. Visit Vienna by all means but do not forget the beautiful country and its other two interesting cities of Innsbruck with its history of Andrew Hofer called the George Washington of the Tyrol and the fascinating city of Salzburg with its memories of the two great men—Mozart in music and Paracelsus in medicine. There is a monument to Paracelsus in the old church of St. Sebastian. Paracelsus had a father who tutored him in medicine and at the same time searched for the "Philosopher's Stone." He studied disease wherever he could find it, in the streets, alleys and along roads in the country. He learned much in his talks with barbers, sow gelders, midwives, gypsies and the lowly horseshoer. Going to Switzerland he lectured at Bale (Basel) in his broad German-Swiss dialect and his discourse was often illustrated with off-color stories. Nevertheless he attracted crowds to his classes where he taught that Galen was wrong. He was one of the first to ask that medical practice be based on experiment and observation not forgetting however, the real knowledge of the past. For his criticism of the medical profession and the druggist he was hauled into court and found guilty. However he escaped before the police could find him and returned to Austria. Paracelsus was among the first to follow the teachings of Theodosius of Cervia who in the thirteenth century taught that pus was not necessary in the healing of wounds. The next man in medical history of any importance was Lister. Paracelsus lived fighting his way. How he died we do not know. His bones rest behind his picture in the church in Salzburg. The inscription gives him among other titles that of Doctor of Medicine. On the outside of a building in the center of the town now used as a drug store, which is rather appropriate is a plaque with an inscription giving the information that Paracelsus lived in the house. Paracelsus, or to give his full name, Phillippus Aureolus Theophrastus Paracelsus Bombastus Hohenheim, was a most interesting character. His life is well worth reading. A great deal of a quack delving into all sorts of things, he added substantially to the medical knowledge of his time. Salzburg is a town where much can be seen without great effort as it was formerly a walled

city and the principal sights were within the line of the old walls. There are many large restaurants in Salzburg. In the Stiftkeller (rather suggestive name) near St. Peter's church and graveyard—Hayden, the composer spent his evenings with musical friends. One can visit fine museums, see great churches built by the Bishop Princes and besides listen to fine music as provided by the Festspiel. Seeing "Yederman" the old morality play of von Hofmansthal with Moissi in the star part—Fidelis and other operas and music adapted by Mozart. In the cathedral the masses of Beethoven played by the organist Sauer and Wessen. The person to whom music has a strong appeal can easily spend a week here.

GOTHENBURG, SWEDEN

We left New York by the Motorship Gufsholm and landed in Gothenburg nine days later. Here one finds excellent hospitals, some very interesting museums with rooms furnished in different periods to illustrate the way people lived. There is the University College and the Chalmers Technical Institute. Gothenburg reminds one very much of Holland because of its many canals. In fact it was laid first by Hollanders. The historical side of the city shows that it was founded by King Gustavus Adolphus "The Lion of the North" and the champion of Protestantism" about 1619. A recent number of the London Times announced that one section of the great Vatican library at Rome was the gift of Queen Christiani, daughter of Gustavus Adolphus, who abdicated the throne and embraced Catholicism.

About 17 miles from Gothenburg is Floda near Lake Savilange; here on the Naas estate is the famous Sloyd Seminary founded in 1874 by Angus Abrahamsen a citizen of Gothenburg. Students come from all over the world to study the methods in manual training which were devised by the Swedes and now used everywhere. Gothenburg has two fine botanical gardens, the old one, Tradgardsforeniger, being right in the center of the city where one may see the plants and flowers and also listen to good music during refreshments.

GOTA CANAL

From Gothenburg to Stockholm runs the Gota canal through the center of Sweden. One gets into a little boat and goes up to the woods and down to the sea again. The steamer sails along the Gota river and comes to Trollhattan Falls where

there are large hydro-electric stations, at the side of which one can see the rapids from which comes the power. Here we took a long walk while the steamer went through a regular stairway of locks. Then we passed to Lake Vanern which is a small inland sea and out of it by a series of locks until we were 300 feet above sea level—enter another narrow river, so narrow that one can touch the branches of the trees. Then one comes to Lake Vattern, here we stop for a short time at Vadstena with memories of St. Bridget, Sweden's most distinguished national figure of the fourteenth century, founder of the Order of St. Bridget with its hospitals and nurses. From Vadstena we continued to Motola and come to Berg with its 15 locks and change for another good walk. Then through the many islands of the Baltic Archipelago the little boat enters its last canal called Sodertalje cut out of the rock and then passing the islands great and small of Lake Malaren we come to Stockholm. The trip takes two and a half days and is the best way to get an idea of the country. Sweden is an easy country in which to travel. The study of English is compulsory in the schools. I never hesitated to ask questions because upon trying I found that the person addressed would nearly always reply in my own tongue. For a coffee drinker like myself I must say that the Swedish people know how to make good coffee. The Swedes are a very democratic people and as far as I could judge have the same outlook on life as we do. Of all the people in Europe they use the telephone the most. They love music and pictures and home comforts. I saw many copies of American music in the windows, also phonograph records. The Swedes are a very likeable as well as substantial people who have been a source of strength to our own country. In fact there is shortly to be a celebration of the three hundredth anniversary of the first permanent Swedish settlement in America. They have been among the best supporters of our American institutions. We have in our own city of Detroit about 20,000 Swedes. In the upper peninsula are many people from the northlands who have been the pioneers in developing the resources of a land which resembles their own in many respects.

SMORGASBORD

Just a word about Swedish meals. One begins his meals with a collection of food with the above title. An enumeration of

the dishes one day showed 25 articles; three kinds of bread, two varieties of cheese, unsalted butter, omelette of mushrooms, dill pickles, radishes, beets, cucumbers, four kinds of salted fish, fried kidney, salmon in jelly, sardines, boiled potatoes, cold veal, ham, tomatoes, lettuce, head cheese, shrimps. One helps himself to what he likes and eats it before his regular meal which consists of veal and potatoes, fish, dessert and drinks. It is a fearful and wonderful experience the first time but one soon gets used to it and follows the old saying "when in Rome do as the Romans do."

STOCKHOLM

Stockholm is a delightful city modern and up-to-date with its many fine buildings. It is the capitol of Sweden, the residence of the court and seat of the Rigsdag or Parliament. The city hall, a masterpiece in brick, is one of the finest buildings in Europe and is not only a delight to the eye but has many fine rooms to visit. One of the great halls is furnished in Mosaics in which the countries of the world are depicted. The United States has the American flag, an American Indian, skyscrapers, etc. Stockholm has its university with a fine medical department. Thanks to my friend Dr. B. H. Larsson who gave me a letter of advice, I was enabled to get about and see things.

SERAFIMER LASARETTET

First to the Serafimer Lasarettet, this means hospital, where Professor Gosta Forsell, professor of X-ray and Radiology, has a fine clinic. Professor Forsell was absent, being in Amsterdam attending an International Medical Meeting and his chief assistant showed me through the hospital which is old in type but doing good work especially along X-ray lines, of which Professor Forsell is one of the leaders. Plans are being made for a new institution. In the professor's room the walls were covered with photographs of X-ray men from all over the world and among them I saw the faces of Doctors William Evans and Rollin Stevens of Detroit. This struck me as a very nice idea, all these photos of fellow workers with words of appreciation.

While walking through the hospital we met Dr. Israel Holmgren who is professor of the Faculty of Medicine, University of Stockholm, administrator of the hospital and member of the Swedish Senate. Later I found he is the editor of the Archives of Medicine and well known through Europe and America for his medical work.

He speaks English so well that he can joke in it, which gives an idea of his ability along that line and of course speaks French and German. The European doctors are linguists and scholars besides being physicians. Under Dr. Holmgren's guidance I saw the wards, no private rooms, in fact his own private patients have to be accommodated in wards if they desire to enter the hospital. This will be remedied in the new institution. Learning by a chance remark that medical history was of interest to me, he took me over to his home nearby in the hospital grounds, and here was spent one of the most pleasing hours of my trip. His library is a real workshop, books lining the walls to the ceiling, American, English, French, German and Scandinavian. The room was furnished with oil paintings, easy chairs, a desk piled high with work, the typical work-room of a busy man. He showed me his fine collection of old medical books. There was a small book on American History presented to his grandfather bearing the signature of Benjamin Franklin on the title page. Here was given one the privilege of seeing the inside of a Swedish home which is quite different from ours. The doctor has a sound-proof room on the top floor of his home where he can retire and rest secure from interruptions. All in all Dr. Holmgren is a delightful man whom I consider it was a privilege to meet.

RESTAURANTS

Leaving the hospital I gathered the family and went to lunch at "Den Gyldene Freden" or "The Golden Peace" an old and famous cellar restaurant where there is excellent food and drink at moderate prices. Don't miss this place or the "Rosebad," Cafe Opera and others and don't forget to have delicious coffee and the best of cakes at any of the numerous "conditeri."

It might be of interest to say here a few words about tips. In Swedish hotels and restaurants the tip to waiters is 10 per cent of the bill. The hotel servants 15 per cent divided among the "Portier" chambermaids and hotel porters.

"THE SCIENTIFIC CITY"

Outside Stockholm about 30 minutes by electric train at the station called Frascati, after the town in Italy, is situated the new scientific city. Here are seen the really magnificent buildings of the "Swedish State Museum of Natural History," Na-

tional Academy of Science, the Nobel Institute, the School of Forestry, the Veterinary school and a very fine botanical garden. The place is still in its infancy and one is impressed with the great work going on in the small countries. Sweden has always been noted for its scientific spirit in all lines.

NORTHERN MUSEUMS

Stockholm possesses some excellent museums. The Northern museum with its great collections of antiquities and other objects relating to the history of Sweden is a place to visit again and again. Here you find rooms furnished in the various periods from the earliest times onward so that it is possible to visualize the life of the people as in no other way. Models of all sorts abound. Nowhere else in the world can Scandinavian life be better studied. Nearby is the biological museum housed in a wooden building somewhat after the style of the old Stave church. Here one can study the animal life of Sweden, 12 sections illustrating the different divisions of Sweden.

SKANSEN

A short walk and one comes to Skansen which is called the greatest outdoor museum in the world. Here are gathered buildings of all kinds, churches, farm houses, Lapp homes, dwellings, from all over Sweden one may enter and see how the Lapp lives; the peasant of olden times, the farmer, cheese maker, the church they worshipped in may be seen. Performers in the natural dress do the old time dances to the music of old Sweden. When one tires of this there is a fine open air restaurant where one may refresh himself while listening to the music of a good military band. The waitresses all dress in the peasant style. This is one of the sights that must not be missed.

MARIA SJUKUS HOSPITAL

I saw several operations at this hospital and through the courtesy of Dr. Hellstrom was shown the hospital, an old time place but up to date in the work. In the operating rooms the men were wearing dull green gowns and the patients were covered with the same sort of sheets. The reason for using green is because it is easier on the eyes, same principle as green tile and green paint in our own operating rooms. Much local and rectal anaesthesia here as in Berlin, Vienna and Budapest.

"DR. IVAN BRATT AND THE STOCKHOLM SYSTEM
OF ALCOHOLIC CONTROL"

As the question of prohibition and alcoholic control is one of the main topics of conversation daily in the United States a few words regarding the system used in Sweden will be of interest. Accordingly a visit was made to Dr. Ivan Bratt, originator of the Stockholm System, or as it is now called the Bratt System. Dr. Bratt was educated and practised as a physician in Stockholm before giving up his whole time to the system. He speaks English fluently and has a decidedly pleasant manner and one instantly feels he is in the presence of a man with a great idea, fully capable of carrying it out. In brief the Stockholm System is a form of monopoly whereby a private corporation controls the manufacture of alcohol in Sweden as well as importation of all forms of alcohol. The corporation can only make 5% on its investment and the control is in the hands of a group consisting of five from the company and five from the government, all profit over 5% goes to the government. This corporation supplies to companies of which there is one in each of the various districts of Sweden with liquors. To obtain wines, brandies, whiskies or in fact any known form of alcoholic beverage one must obtain from the main office a book. Before getting the book one must give his life's history, amount he pays in taxes, whether you have ever been arrested for being drunk, inform the company of the quantity of intoxicants one thinks he requires for ordinary purposes. The company then investigates to see if the applicant is 21 years of age, whether he has ever been found guilty of drunkenness or certain crimes more than once. If the applicant is found guilty he is out of luck. If the applicant is satisfactory a pass book is issued. (It is said that there have been more copies of this book published than any other in Sweden.) This book tells how much one can buy a month. Men under 25 years of age do not readily obtain books and particular attention is given to issuing books to women. Under the Bratt System in hotels and restaurants you have the following units:

Spirits. No wines or spirits are served before 9 o'clock or during hours of divine service.

Intoxicating liquors. May not be served before noon, and after that hour with certain restrictions only to a guest having a meal.

Hot wines are served only to persons having meals and subject to certain restrictions, also to guests taking light refreshments such as pastry, fruits, etc.

Light wines and light drinks may be served before 15 o'clock weekdays and 19 o'clock Sundays in connection with meals, and are after that hour free of restriction.

After midnight no wines and spirits are served and guests are not admitted to restaurants after that time.

There is no temptation for the proprietor of a restaurant to sell you more liquor because he buys all his supply from the company and if his total sales rise above a certain maximum he is deprived of his profits and sometimes of his right to purchase. What are the results? I have only imperfectly given a few high lights in the system which is now 10 years old. Statistics are as follows:

1913 Sentences for drunkenness was 10 per cent per 1,000—all Sweden.

1923 Sentences for drunkenness was 5 per cent per 1,000—all Sweden.

1913 Sentences for drunkenness was 41 per cent per 1,000—all Stockholm.

1923 Sentences for drunkenness was 18 per cent per 1,000—all Stockholm.

1913 Alcoholics admitted to Central hospital, 584.

1923 Alcoholics admitted to Central hospital, 211.

It is to be regretted that lately there has been trouble due to smuggling of spirits into Sweden from Germany and Eus-thonia. Of course it is difficult to predict the results of the system. Dr. Bratt has repeatedly said that it is an experiment that must be judged by its results. To what extent it can be applied to other countries can naturally not be determined beforehand and its originator has never dreamed it can be made an article of export. Dr. Bratt says that the only article he has written in English appeared in Harper's magazine for May 1923. There are two pamphlets in English, "The Swedish Alcohol System," by M. Marcus and "The Alcoholic Question in Sweden," by Einar Rosenberg which explains the system more fully.

Stockholm is a city that one easily learns to like, the people are cordial, much English is spoken, there are many excursions to be made by tram, train, and the little white boats will take you out into the Archipelago for which Stockholm is famous. All sorts of boating, fishing, and with it good food and drink at most reasonable prices.

VISBY

From Stockholm we went for a visit to the ancient city of Visby in the Island of Gotland out in the Baltic. This city of Roses and Ruins is one of the few places in Europe where the city walls are still

complete. The town has many churches, ruins of an old hospital and a history that is appealing in its melancholy. Well worth a visit by the lover of ancient things. Once it was a great commercial city, one of the Hanseatic League; in fact, for a time it was the headquarters. In those days Visby was the opposite of what the travelers see today. The riches that flowed here were expressed by the poet in these words:

*"The Gotlanders weigh gold with twenty-weights,
And play with the choicest gems,
The pigs eat out of silver troughs,
And the women spin with golden distaffs."*

But those days are gone forever, only the sleepy little town greets you.

UPPSALA

Another trip was made to the old city of Uppsala with its university the oldest and largest in Sweden celebrating its 450th anniversary this year, and the cathedral also the largest in Sweden. In this church are buried Gustav Vasa and his three wives, Swedenborg, the mystic, and of interest to medical men Carl Von Linne of which more later. Up in the hill is a great barn of a castle, scene of the abduction of Queen Christianna in 1654. The university buildings are scattered about the town but are in excellent condition. The Museum was formerly the anatomical laboratory of Rudbeck. His statue is now in front of the histological laboratory which is well filled with specimens. Rudbeck described the intestinal lymphatics and their connection with the thoracic duct. Below the castle is a beautiful botanical garden with its university building of the Classic temple style. This garden replaces the Linneaus Botanical Garden, which however is still preserved. The garden was originally founded by Olof Rudbeck, the Elder, in 1655 and became famous through the work of Linne. The library is large and has many famous books, among them the "Codex Argenteus." The University hospital situated on a slope at the edge of the town is one of the finest I have visited, with its double doors, large rooms, sitting rooms for patients on each floor, fine offices for the attending physicians, up-to-date operating rooms, kitchens and baths. On the wall of the ante room of the operating department presided over by Prof. Gunnar Nystrom is a picture of Dr. William Mayo.

OLD UPPSALA

A short distance from Uppsala is "Old Uppsala" the cradle of the Swedish King-

Swedish kings and the center of pagan worship in the north. Now all that is left is the three mounds of earth which are said to be the graves of three kings of old, about the sixth century. Some question this however.

LINNE'S HAMMARBY

After visiting Uppsala I made a little pilgrimage to the old home of Linne, "The Father of Botany." This was done in a well known car manufactured in my native city of Detroit. Here in this shrine of botany in days gone by students from all over Europe and even America came to sit at the feet of the master. Linne was a doctor of medicine, his degree being obtained in Holland. It is said that in his early days as a physician he was much in demand by the young men of Stockholm for his skill in treating certain special diseases of youth. Another story is to the effect that he studied medicine so as to marry a wealthy doctor's daughter. Linnaeus was the first to give a concise description of plants and animals and originated the idea of classifying each definite natural object by a generic or family name. Among his works are "Systema Natural (1735) Materia Medica (1749) and his scheme of Nosology (Genera Morborum 1763). He is said to have given good descriptions of embolism, hemiparesis and aphasia (1742) "Garrison." The estate is about six miles from Uppsala and was purchased by Linne in 1758 and used by him for 20 years as a summer residence. He had a "museum" on the top of the hill, there are still foreign plants growing that were planted by him. In this little museum building he had his herbarium and other collections and here he lectured to the students. The chair in which he sat and the three wooden benches are still there. The students lived in the farmhouses round about while attending his lectures. The collection made by Linne was sold after the death of his son in 1783 to the English botanist J. E. Smith and is in London at Burlington house under the care of the London Linnean society. The estate consists of three buildings, the main building with two wings, the eastern and western. The estate is now owned by the state and is known as the "Linnean Institute at Hammarby." In the main building are many relics of Linne including the bed in which he died, above the door leading into the bedroom is painted Linne's motto "Innocue Vivito, Numen

Adest" "Live innocently, God is near." The parlour is unique because of its papering which consists of prints from J. Burmann's work on Plumer's American Plants published in 1755-60. The eastern wing is only used for purposes connected with the estate. The western wing houses a collection of reproductions of Linne's portraits, monuments, clippings, casts, etc. So back by the Ford and thence to Stockholm after my little visit to the home of Linne, the great botanist, who was also a physician.

DALECARLIA

From Stockholm we went to Dalecarlia to the town of Rattvik called the "Eye of Dalecarlia. Here it was that Gustavus Vasa called his countrymen to arms. In the old churchyard is a monument to commemorate the occasion and here one Sunday we see the people in their native costumes entering the church. Round about the church are little wooden cabins where the people put their horses while at church. Surely a human thing to do in the cold weather. These are not used as much in these days of motors. It was an interesting ride to Leksand where there is a church holding 5,000 people and believe me it was well filled with worshippers who lifted their voices right lustily in the singing of hymns. It would take a woman to describe the various outfits worn by the people. At Mora nearby is the home of the great painter Zorn, who recently died. We leave Dalecarlia with regret and now through increasingly beautiful scenery we come to the land where like in the northern part of Sweden the sun never seems to set. At 11 p. m. it is still light and at 2 p. m. it is morning again. It recalls to the mind the lines of Edmund Gosse:

*"There is no night time in the northern
summer,
But golden shimmer fills the hours of sleep,
And sunset fades not, till the bright new
comer,
Red sunrise, smites the deep."*

NORWAY

Oslo, formerly Christiana, the largest city and capital of Norway is situated in a fjord called by the name of Oslofjord. Here we took an auto and rode along the principal street called Johnsgate at one end of which is the Royal Castle. Up to the top of Ekeberk hill where there is a fine view of the city; then through the old town and passed the park called Hauskanger to Holmenkollen for another magnificent view. Here we pass Konsgaarden,

the summer home of the royal family. Nearby is a fine people's museum known as Bygdo with its open air section devoted to original old farm houses, furniture, etc. from various parts of Norway. Here we see the Gol Stavkirke, an old wooden church built in the twelfth century brought here in 1885 from Gol, in the district of Hallingdal. On the way back we stopped to see the famous Oseberg Viking ship. Other sights of interest are the university, national theater, and other public buildings.

OSLO, NORWAY

The medical department is a part of the King Friederich university. The number of medical students is limited by law. I had a long talk with Dr. Charles M. F. Sinding-Larsen, Direktor, Rikshospitalet, which being translated means State University hospital. He was busy with plans for a new institution and from the looks of them it would be the last word in hospital construction. In this city hospital and in all the state institutions the price per day for a patient is three Swedish Kroner, about 75 cents a day. Besides the clinics and hospitals in the city there is a great city hospital on the outskirts of the town and about 40 miles away is the great Municipal Tuberculosis Sanitarium. One also goes to see the old Viking ships with their thousand year history and the museum with its relics of Viking days. America is especially interested in the story of Leif Ericson who it is said discovered America 900 years ago.

WOMAN'S HOSPITAL

The Kvindeklinden or Woman's and Babies Clinic is a fine modern building especially equipped for obstetrics. The chief is Dr. Kr. Brandt, one of the leaders along this line in Scandanavia. His first assistant Dr. Kr. Skajaa very kindly showed me through the hospital. Price here even for obstetric cases is three Kroner per day. There is published at Helsingfor a journal devoted to obstetrics and gynecology called "Acta Obstetricia et Gynecologia Scandinavica." The hospital averages between 1,500 and 2,000 obstetric cases a year, 85 per cent spontaneous and no narcosis used. Thirty Caesarean a year, they wait a long time before using forceps, depending on action of fetal heart or whether case is clean or infected. Eclampsia is treated by venesection and the Stroganoff method. Hospital period 14 days. There is very little G. C. infection. There is a well conducted school for mid-

wives, course is one year and costs 300 Kroner. Afterwards they are sent to country districts and earn about 3,500 Kroner a year. One Kroner equals about 26 cents in American money.

NORWAY

Norway has more wonderful scenery in a small compass than any other country in Europe. In three hours' auto ride you may have all the seasons of the year. We went from Oslo to Myrdal and through the wild Flaen Valley to Sognefjorden, snowball battle in July, down to the fjords thence to Stalheim with one of the most glorious and impressive views in the world and one of the finest hotels in Europe. Then on to Ulvik via Voss by motor, next day to Breiforin via Utnia to Odda where the pass goes up the mountains between banks of snow, a desolate country. Breiforin to Nesflaten to Dalen through this Telemarken to Skien and back to Oslo. You make your way by boat, train, auto, walk and then ride in a curious two wheeled mountain carriage called a "stolkjaerre." It is a land that knows no night, the land of a thousand waterfalls, of picturesque valleys and snowclad mountains, glorious sunsets. For the hiker wonderful climbs, for the motorists good roads. Excellent country hotels, the like of which I never saw before, prices are exactly the same in all of them. One can make any kind of a trip he wants and find good accommodations. Norway is a paradise for fishermen and hunters. But we must leave this land of scenic delight.

DENMARK

From Oslo we went by train southward to Denmark and its capital Copenhagen. Denmark is called "The Country of the Sea" as it is almost surrounded by water. There is no other country in Europe with such an abundance of islands and peninsulas, the same constant changing of sea and land, of straits and channels, of bays and fjords.

COPENHAGEN

The capital, Copenhagen, has been termed by some "The Athens of the North." It is an old city with an interesting history, very important business center busiest port of Denmark. We liked Copenhagen very much, there is a sort of cosmopolitan aspect that appeals to all. Of interest to the tourists are the renaissance buildings like the Exchange with its queer green dragon spire that makes us think of the Far East, the beautiful little

palace of Rosenberg with its great collection of art treasures, Thorwaldsen's museum, in the courtyard is buried this great and good man; the national gallery and the wonderful Carlsberg Glyptotek. The Town Hall is also very fine in a modern way.

"FINSSEN INSTITUTE"

When one thinks of Copenhagen in a medical way there is always one figure that stands out and that is Niels Finsen, the pioneer in light therapy, the "Institut Phototherapique." Finsen was the first place visited. Here I was shown about by the Chief of the Clinic Dr. Svend Lomholt. The institute is now in its twenty-fifth year and consists of five departments so that all the various departments of medicine are covered. There is a staff of about 260 people employed. The situation is a pleasant one with gardens between the buildings. The large room in which some 30 or 40 people were undergoing treatment with the Finsen lights mostly for lupus or tuberculosis of the face and extremities, is a unique sight. There are other rooms where the individuals, stark naked, are getting the arclight treatment for tuberculosis. It is a busy place. The records have attached photos showing the skin lesion in the beginning and then at the end of treatment. It is truly the world center for the treatment of any diseased condition in which light, radium or X-ray treatment is indicated.

TIVOLI

No visitor to Copenhagen should miss the great amusement park called Tivoli, with its fine bands, outdoor restaurants and amusements of all kinds. Situated in the center of Copenhagen, it is in a class by itself.

"ELSINORE"

And always to the lover of Shakespeare will come the thoughts of that most quoted of his plays "Hamlet" for it is in Denmark at Elsinore (Helsingor) that the scene of Hamlet is laid. We made a trip to this lovely spot to visit the grass-covered ramparts of Kronborg Castle, which guard the strait, this old sentry of the Baltic, where they point out to you the spot where the ghost of Hamlet's father appeared. If you will believe it you may see near by in a beautiful park what is said to be the grave of Hamlet. Elsinore is a picturesque and interesting old place. It was in Hamlet that Shakespeare tells us that:

*"Our wills and fates do so contrary run
That our devices still are overthrown."*

One can combine with this trip a visit to

Fredericksberg Castle with its wonderful national collection. The history of Denmark has always been closely connected in past centuries with that of England especially in the days when Denmark was mistress of the north. How times change and nations also. There is also on the way the Fredensborg Slot with its rather plain buildings but wonderful gardens where in the days before the great war the nobility of Europe were wont to go and rest from the formalities of court life. There is much to be seen in this little country with its memories of Hamlet and our childhood days, Hans Christian Anderson, who was a Dane. We must hasten on to the next step of our journey.

BERLIN

In our travels we have visited Vienna, Buda-Pesth, Oslo, Copenhagen, Stockholm and Prague but in Berlin we found the greatest activity; business seems to be humming; shops filled with goods; the great department stores like Wertheims filled; theaters, cabarets, beer halls, restaurants and coffee houses are doing capacity business. One day we had lunch at Tempelhofer Field in the suburbs of Berlin. This is also a busy place with planes coming from all parts of Europe with a railway schedule.

KAISERIN FREDERICK INSTITUTE

To the medical man who speaks German, Berlin is a fine place to go about visiting hospitals and clinics. To help the foreign physician seeking post-graduate work in Berlin there has been established the "International Medical Post-graduate Courses." These courses are conducted by a union of professors and by an organization centered in Kaiserin Frederick Institute with the assistance of the medical faculty of the University of Berlin. Externships in clinics and hospitals and laboratories are also provided. The courses listed are intended for foreign physicians who intend to stay in Berlin for more than a month for the purpose of specializing thoroughly in a certain branch of medicine. Practical courses are given in German and English. The office is, Kaiserin Frederick Haus, 2-4 Luiseuplatz, Berlin, N. W. 6.

The director in charge is Professor Dr. C. Adam, a very pleasant gentleman, who will be glad to give any information desired. Courses are on a monthly basis and includes under the price the rate for several persons. The rate for several persons,

one person only costs 50 per cent more. Rooms may be had in flats and hotels. Rates in hotels from 8-10 R.M., that is, \$1.50 to \$2.00 per day. Private rooms, 50-100 R.M. a month. Rooms can be arranged through the office. Courses at present cover Pathological Anatomy, Pathology, Bacteriology, Sociology, Physical Chemistry, Internal Medicine, with practical work in Laboratory, Roentgen Treatment, Neurology and Psychiatry, Pediatrics, Surgery, including Orthopedics, Gynecology and Obstetrics, Forensic and Social Medicine. Rates vary from 10-20 R.M. per hour and also by private arrangement. Most of the courses average 200-250 R.M. per month. R.M. equals 24 cents in American money.

HOSPITALS AND CLINICS

Among the great hospitals a visit was made to the "Charite", where several lectures were heard in wonderfully equipped amphitheatres with lanterns, blackboards, laboratory equipment, X-ray stands, skylights worked by electricity, so that the room could be completely darkened. Patients were examined very thoroughly and as a rule only one or two patients are used during the demonstration. Students are called down to examine cases and be quizzed. There are many women studying medicine in Berlin and Vienna. In the entrance hall to the Pathological building is a marble bust of Virchow and in one room are relics of this great man. The museum itself is vast and, of course, especially rich in specimens relating to tuberculosis, cancer and syphilis. The number of specimens are such that one can study the effects of these diseases and others on any part of the human body. Another day a visit was made to the Surgical Clinic of the great German surgeon, Bier. The Clinic is held in one of the old amphitheatres and is one of the old type, the master surrounded by his faithful staff and the crowded rows of students looking down, really makes a wonderful picture. In this part of the theatre is a bust of John Dieffenbach, 1840-1847. John Frederick Dieffenbach was one of the greatest of German surgeons and made many advances along this line. He was a soldier in the German war for Independence, was noted for his ability as a teacher. He said that the surgeon should be a many-sided individual, be a clear thinker and a good writer. As a man he was beloved for his many engaging qualities and this explains why his bust is in the Bier Clinic. This was a general surgical clinic, several fracture

cases, diagnosis of jaundice from cancer, stone in right ureter, tumor of the neck, atrophy of the muscles, diagnosis from malignancy (young girl) and lastly, operation for large abdominal hernia. The operator wears wooden shoes, no gloves, "Bier says he is not afraid of infection in a clean case", wear face masks attached to eye glasses, crowds of assistants, students called down to examine cases and be quizzed. Bier is a fine teacher and has a great personality, very pleasant to meet. Rectal anaesthesia is used a great deal and a new one, called "Avertin", said to be a combination of ether and bromide, is being tried. It is a secret preparation and still in the experimental stage, as in the hernia case, not always successful. In Germany medical students go from one university to another during their course of study. In this way they are enabled to get a training that is rather different from the one that is usually carried out in our country. To my mind it has some very definite advantages.

It is best not to be in Berlin during the months of August and September, as these are the vacation months for the big men. Berlin has so many hospitals and museums that one can spend any amount of time going about. Of course, there are other attractions such as the museums of art and sciences, the Royal Library, opera, theatres, and all the historical monuments to be seen. It is good to see the monuments to medical men like Virchow and, in the Charite, busts of Traube, Orth, Althoff, and others. Would that more of this was done in the world to remember the great men of medicine who have done so much for humanity to save life and not destroy it, as witness the statues to military heroes.

To the German-reading physicians who desire information relating to all the medical activities in Berlin, I refer them to *Die Medizinischen Fortbildungskurse und Einrichtungen Berlin*, published by Oscar Rothacker (Urban and Schwarzenburg), Berlin, N. 24, Freidrichstrake, 105 B., for October, 1927.

Berlin on the Spree is surely getting ready for giving post-graduate work to the *Ausslander*.

DRESDEN

From Berlin we went to Dresden, the capital of Saxony, on the banks of the Elbe. This is a most satisfactory town to visit and casts a spell over most visitors, especially those interested in Art. It is

called the Florence of Germany. This year there was a most interesting exposition devoted to "Paper". One never realizes all the uses paper is put to until he sees an exhibit like this, everything from a fan to a locomotive wheel. Nearly every city in Germany has an exhibition of some sort during the year and they are worth seeing. The great treasure in art is the famous "Madonna di San Sisto" by Raphael. In the Green vault one sees a fine collection of man's ingenuity and among them the celebrated "Court of the Grand Mogul", with its 132 figures all made out of pure gold. One of the finest collections of arms and armour I ever saw are in the Museum Johanneuss. There are many beautiful parks, churches and notable buildings. One can go by motor to Meissen to see the Royal Porcelain manufacturing which, by the way, was the first place in Europe where porcelain was manufactured in 1710. The region round about, known as the Saxon Switzerland, provides many trips of interest.

PRAHA

Praha, or as we say in English, Prague, the capital of the old kingdom of Bohemia, and now the capital of that patchwork of nations known as Czechoslovakia, compound of Bohemia, Moravia, part of Silesia, Slovakia and Carpathian Ruthenia, a state made up by the League of Nations after the strenuous work of Masaryk. President Thomas Garrique Masaryk is one of the most talked about men in Europe and many people are of the opinion that it was entirely due to his efforts that we have the republic of Czechoslovakia. His life story is a most romantic one. Before the war he was known principally as a writer and philosopher. As a politician he is vastly different from our popular conception. Essentially a religious man, it is said that his motto is "Jesus, not Caesar", which does not sound like the slogans used in this country. His life is well worth reading. Czechoslovakia has been called a land of spas and woods and is well called. Here we find the famous spas of Karlovy Vara (Karlsbad), Marianske Lazire, (Marienbad), Frantiskovy Lazue (Frauzenbad), Jackymov (Joachmsthal). This is the state owned radio-active spa, and the queer island of mud, called Piestany, where you can see a whole museum of crutches of patients who have been cured there. At Podebrady there is an up-to-date research institute and hospital for heart disease. In all of Europe

it would be hard to find such an array of springs with the one exception of Budapest. The Czechoslovak State railroad grants to all visitors to spas or health resorts a 50 per cent reduction in the price of railroad tickets for the return journey, the only condition attached is that ten days be spent at one of the places.

PRAGUE

Prague is situated on the River Vltava and is one of the oldest of the European cities famous for its art, architecture and rare historical monuments. Among the sights we mention the Castle of Prague, the old Jewish Cemetery and Synagogue, the little Chapel where John Hus preached, the abode of Mozart, the old university founded by Charles IV in 1348, the great Cathedral of St. Vitus, dating from the fourteenth century, the old bridge across the river, and the many monuments; in fact, from a historical standpoint there is much to see. At present the city of Prague on its main streets resemble an American city as the streets are torn up and much work is being done in this city of the new republic. Someone has dubbed the Czechs as the "Yankees" of Europe. By the activities in the street it would seem so.

KARLSBAD

I made a trip to Karlsbad, "The Queen of European Spas", as Karlsbad is called, where it is said over 70,000 visitors and 200,000 tourists gather during the season from all countries of the world. The medicinal qualities of its hot springs and baths are said to be unrivalled. Here are found general practitioners and specialists speaking almost every language, to look after the welfare of the visitors. In the summer it is very hot and dusty in Karlsbad and apparently not so crowded. It is interesting to see the people going to these springs with their glasses and solemnly drinking the prescribed amounts at periods of the day. At the noon hour music is provided and the people promenade back and forth.

Prague has its university and medical department. The hospitals are situated on the edge of the city with the university buildings scattered about. Owing to the language difficulty and because the summer vacation was on I was unable to get any very definite information regarding medical work in Prague. So we left Prague and went to the Mecca of all good American post-graduate seekers.

VIENNA

If one may judge by the activity about the A. M. A. headquarters, there is no let-up in those who go for post-graduate work in Vienna. To the old-timers it may be news that the Cafe Zur Klinik at the corner of Lazarettgasse and Spitalgasse is no longer the place of meeting of the doctors in Vienna. It is now the club rooms of the Egyptian students. The new address of the A. M. A. is the Cafe Edison, Alser strasse 9, Vienna, VIII, where, on the second floor there is much more room. The work is now being taken care of by two men in the office with the assistance of various orientation men. The place is as busy as a beehive with American doctors, black and white, male and female, who are coming and going, eating and chatting and consulting the cards which give the various courses. The prices have advanced over two years ago, when membership was \$5.00 to \$14.00. Ten dollars for membership (life), one dollar a month dues, and three dollars for a year's subscription to "Ars Medica", the journal of the A. M. A. of Vienna, published in English and giving a review and abstracts of foreign (especially Viennese and German) medical literature. It is an international exchange of opinion, a small journal, but interesting on account of the information it gives in regard to the latest work in Vienna. To the intending visitor it will save time and money if he will write to the A. M. A. at the address given for a copy of the "Blue Book". Here he will find a history of the organization, the aims and purposes, list of members, professors giving courses, list of courses, in fact, all the information necessary in order to take up post-graduate work in Vienna. In the A. M. A. headquarters he will meet with people who speak English and have the whole machinery oiled for his benefit, provided he has the necessary funds. For those who are familiar with German there are the courses given by the University of Vienna. Copies of the catalogue of the university in German entitled, "Verzeichnis der öffentlichen Vorlesungen und der Wiener Universtat in winter und sommersemester und Verzeichnus der Ferialkurse" can be obtained by sending 25 cents in American money or English stamps, to Wilhelm Maucrich, Spitalgasse, 1 b. Wien IX, also of interest to readers of German is a new book entitled "Das Medizinische Wien", von Dr. J. Friedmann. Cost, Austrian shillings, 4.25-6. Shilling is approximately 14 cents. This book can also be

obtained from the same address given above. It is illustrated and is a mine of information. The author says in his preface: "First and foremost, this book is written for the benefit of the medical profession. The writer has had special opportunities for observing American physicians doing work in Vienna and as a result of his observations he writes this little book, 'Medical Vienna.' He says that the book is to be translated into English" (I hope so) "and is for the purpose of aiding medical work and to be of benefit to medical visitors in Vienna. The medical life of Vienna is manifold and far-reaching and is always advancing and new discoveries are being made in the great work of medicine. Not only the strangers, but the doctors of Vienna can find something new and worth while in the medical work done in Vienna." With the "Blue Book" of the A. M. A. and the two books mentioned above you will have a complete guide to all the post-graduate work and in fact all the medical work done in the great medical centre.

Vienna has much to interest one in its great museums, not only of art and science but of Anatomy, Pathology, Medical History, etc. "All work and no play makes Jack a dull boy." In Vienna you may get all the work your heart desires and have play, too. What one gets out of post-graduate work in foreign cities depends upon the individual and his knowledge of the language. If one has the time, there is an excellent organization called "The Austro-American Institute of Education", which is under the patronage of the president of the Austrian republic, Michael Hainisch, and has an honorary president, Albert H. Washburn, American minister to Austria, and others. Headquarters are Vienna 1. Elizastrasse 7. The aim of the institute is to be an educational centre, while at the same time being of service to American visitors in all the practical necessities of life connected with their stay in Vienna. To give an idea of the scope of work one can take:

1. Language courses at the University of Vienna.
2. Culture courses in English or German.
3. Conducted tours to schools, libraries, castles, art galleries, etc.
4. Also a seminary for American teachers along the same lines with special reference to teaching of Art by the Cizek method.

The Institute will quote a rate from

United States to Austria for a week, a month, or longer course in Vienna. The rates are most reasonable. You may take a lecture, a day's work, one week, or the entire course. For example, Dr. Frederick Hertz, "Economic Conditions in Austria"; Dr. Alfred Adler, "The Principles of Individual Psychology"; Dr. Clement Pirquet, "The Vienna Medical School", etc.

Around the courtyard of the university are placed in the walls busts of the teachers and I was surprised to find that nearly a fourth of the members were medical men. Names and busts of Billroth, Kraft-Ebbing, Rokitansky, Hebra Skoda and others, Hyrtl, Hoopler, Nothnagel. In the book stores you may get for your library not only books, but pictures relating to medicine like "Der Arzt", by J. Salinger; "Christ als Arzt", by Gabriel Max; "Rembrandt's Study in Anatomy"; John Steen, "Kie Kranke and der Arzt"; "Der Arzt", by Rozynsky, and others. An illustrated pamphlet entitled, "Kunstplatten für das Wartezimmer des Arztes" can be obtained free of charge from the same man who has the medical books for sale mentioned above.

And so "Aufwiedersehen" to Vienna with all its delights even in its days of strife and in two hours by air we were in Buda-Pesth.

BUDA-PESTH

My first air voyage was from Vienna to Buda-Pesth. It consumed two hours and was great experience. As soon as possible I taxied to the Hotel St. Gellert said to be the headquarters of the A. M. A. in Buda-Pesth. To my surprise I found that there was formerly such an organization, but owing to some unfortunate handling there is today no headquarters. The situation in Buda-Pesth regarding postgraduate work is entirely different from Vienna. According to information given me by two American physicians doing work here, one must look over the field and make personal application to the teacher whose work appeals to him. There is the opportunity in this city to obtain actual operative training on the living subject with the Professor standing by. This I understand one cannot get in Vienna or other post-graduate centers without a long period of waiting and then the opportunities are extremely limited. Even in Buda-Pesth the physicians told me that there was not another vacancy until June 1928. Of course private financial arrangements are made for this work. There is plenty of work to be had in the anatomical lab-

oratory in operative work on the cadaver, also in the various types of anesthesia, gastro-enterology, etc. The doctors told me that they were doing work in Vienna and came down to Buda-Pesth several months previous, looked about, made arrangements and when the time arrived came down. So the situation is not for one who wants work immediately. In the summer Buda-Pesth is extremely hot, there is a marked difference in the temperature between Vienna and Buda-Pesth. I would not advise even going there for a visit in the summer if it is possible to go at another time.

Buda-Pesth is a beautiful city with a population of about one million. It has seventy hospitals with a bed capacity of 15,730; it has its university, clinics, fine museums and public buildings of all kinds. The Hotel St. Gellert, referred to above, has connected with it the finest equipped hot baths for men and women I have ever seen. These hot springs in Buda-Pesth, were known to the Romans and are famous for the treatment of rheumatism and joint affections. There is another magnificent bath called the Szechenyi Bath which looks like a palace. One finds three kinds of thermal springs, the St. Gellert, the second has its source in the Joseph Hill in Buda-Pesth and the third is in the level plain of the Lagymanyos. The last mentioned is the bitter water exported all over the world as Hunyadi Janos, Apenta and other names. There are special baths for nearly every kind of treatment, well equipped and up-to-date. It is rare to find a great city that is so completely equipped by nature and man for the treatment of disease by water which is not only heated by nature but of such varied kinds, sulphur, radioactive, bitter, mineral, etc. Among the objects that appeal to America is the statue of George Washington in the city park. The monument that appealed to me the most was on the corner of Elizabeth Place entitled "The Deliverer of Mothers" dedicated to the doctor who made the epoch making discovery that puerperal fever was caused by infection.

(*Semmelweis*)

1818-1865

He was a Hungarian working in Vienna when he made his contribution; his was a sad story. The monument shown here with a mother and the little babes. It is with a sense of pride that one thinks of another name that goes with this great one, the name of an American doctor,

Oliver Wendell Holmes, one in America and another in Europe, men who did so much for the mothers of the world. There is much to be seen in this city of two towns Buda and Pesth astride the Danube. The history of the city and of Hungary itself is of great importance in the story of Europe. Names of men like Szehenyi, Andrassy, St. Gellert, Kucsoth and others, who fought for liberty, come to mind. Today the political situation of this country is a sad one and I hope the powers will take the necessary steps to straighten out the tangled affairs of Austria, Hungary and Czechoslovakia who are sulking with discontent. I cannot enter into detail here but data can be easily obtained. Aside from the beauty of its situation, there are fine hotels and restaurants with Gypsy bands, who play the music of Hungary, the opera, nights on the Danube which is not so blue as the name of the waltz would indicate and a kindly people, everything to make you want to stay.

(Post-graduate Suggestions)

In talking with various men I was struck by the dissatisfaction manifested by some against the so-called personally conducted tours for post-graduate work in Europe. They said that the work was so crowded that it was not possible for a man to digest it all. How can a man work from early morning till late at night and comprehend what it is all about? Another objection was the price paid which in some instances was higher than that paid by the individual student. One should consider very carefully before going up with groups. In fact I think it would be better to go alone.

MUNICH

Munich is the most delightful of all German cities, the real Art Center with its wonderful old galleries crowded with pictures, its marvelous Deutsches museum to which we made four visits with its most complete departments of all human effort. I have visited many museums in my travels but this one is unique. It is a university for the people, you may go down and see a complete coal mine, study the movements of the heavenly bodies built by Zeiss, see every variety of airships, railroads, engines, phonographs, alchemist's laboratory, in fact it needs a large volume to simply catalogue what one can see. There is something different in the Bavarians from the rest of Germany. They like lively things, good music, good beer, the best in Germany, good food, in other words

there is a word they have called "gemmikeit" which describes their characters but which I can't translate in English except to say it is something like "good natured." Munich is a great medical center, the University of Munich, has many famous names on its list, is one of the places where there are excellent opportunities for post-graduate work. Just a few of the names Sauerbrück in surgery, Mueller and Romburg in medicine, Borst in pathology, Hoderlein in obstetrics and gynecology, Lange in orthopedics, Bumke in psychiatry, Neurmayer in ear and eye, gives one a very good idea of the type of work done in this beautiful city. Munich on the Isar certainly has an appeal of its own not only along the line of medicine but to all human desires. There are many delightful excursions to be made from Munich to Oberammergau (scene of the Passion Play) and to various places in the Bavarian Alps mostly by motor cars.

PARIS

Paris, where all good Americans go. We were agreeably surprised that the hotel prices were not as high as we had anticipated, from the reports in the newspapers. There is an increase over two years ago and one finds a tax on all meals. One of the delights of Paris of course is eating. Probably in no city of the world can one find such a variety of places catering to the appetite. There are several books published on this important question. "The Gourmet's Guide," "Where to Eat in Paris" and etc. The latest and best all-around book on Paris is one entitled "How to Enjoy Paris" price \$1.00, to be obtained at any of the book stores. It is not a guide book like Raedekers or others but a real human guide which I think you will enjoy. It tells you all the places to eat and drink, out of the way historical places, and there is a portion devoted to what you can see within 50 miles of Paris.

I am not going to say anything about sightseeing. Just a few words about medical Paris. The University of Paris has its medical department with an eminent faculty. To the medical visitor in Paris I suggest first taking your passport and going to the "Administration generale de l'assistance publique a Paris" at 3—Ave. Victoria, where you will be given upon request a little pamphlet entitling you to visit the hospitals of the city of Paris. There is a complete list of all the hospitals, clinics, and special hospitals, if you are interested in some specialty, with all the ad-

resses. By the way one should not forget to visit the wonderful collections of models of skin diseases in the museum attached to the Hospital St. Louis, one of the finest in the world. Go to old Salpetriere and see the original drawings made by Charcot. They are stuck away in some bookshelves in his old library. Visit the quaint museum of Dupuy tucked in behind the Medical school in an old monastery. And notice how the hospitals of Paris are named after famous men, Lariboisiere, Tenon, Laennec, Bichat, Roussais, Ambroise Pare, Broca, Claude Bernard, Tarnier, Baudelocque and others. What a roll call of names we revere in medicine.

The other place to go for information is "The Association pour Le Developpement des Relations Medicales Entre La France et Les Pays Allies and Amis (Information Bureau for Foreign Physicians). Address Salle Beclard Faculte De Medicine, 12 Rue De L'Ecole De Medicine, Paris. Hours 9-11, 2-5 p. m.

Here you will find an English speaking secretary who will give you information regarding post-graduate work in Paris. A map of the city with the hospitals marked on it with the directions for going to them, a list of courses, teachers and various bulletins are also furnished the prospective student. Here is a list of the courses given in English this year:

Recent developments in diseases of chest and lungs—Laennec hospital, Prof. Sergent and Dr. Rist.

Recent developments in Gastro-enterology—Dr. Bensaude, St. Antoine hospital. Diseases of Heart and Vessels—Dr. Clerc.

Surgery of digestive tract and liver with demonstration on dogs—Prof. Gorset.

Surgery of the nervous system—Dr. De Martel.

Recent developments in surgery—Gregoire, Hertz, Pouchet, Roux-Berger.

Operative courses on cadaver—Prof. Cuneo.

Treatment of chronic disease of bones and articulation—Dr. Colue.

Obstetrics and Gynecology—Prof. Brindeau, Couvelaire, J. L. Faure.

Ophthalmology and oto-rhino-laryngology—Dr. Morax, Lariboisiere hospital.

Ophthalmology and oto-rhino-laryngology—Dr. Lemaitre, St. Louis, hospital.

Diseases of children—Dr. Armand Delille and Weill-Hoth.

Price 50 francs a lesson per person, at present exchange about \$2.00 These are

main courses, others may be arranged with various teachers.

"THE AMERICAN HOSPITAL"

One must never forget in speaking about hospitals to say a word about that "Haven of Refuge" for sick Americans in Europe, the American hospital in Paris. The new Memorial building which was completed by public subscription at the cost of nearly \$1,000,000 is now able to take care of 120 people. This is the only permanent American hospital in Europe and is recognized as a model of scientific equipment. It is served by English speaking doctors and nurses. The entrance to the hospital grounds is at 63 Boulevard Victor Hugo, Neuilly sur Seine, about one mile from the Porte Champerret. Don't fail to put it on your list for a visit. I must say a word about one place that was of great interest, the home and workshop of the author of the Humane Comedie, Honore Balzac. The author of "The Country Doctor" which every physician should read, lived in a little house with its garden now tucked down behind a tenement house. This great genius was always in debt and here you can see the trap door down which he fled when creditors came, the little dolls he used to have in front of him as he wrote, the desk, chair and other simple furnishings are still there.

CHATEAU COUNTRY

A short visit was made to Tours and Blois to see some of the Chateau on the Lo with their great historical interest. We visited Chenonceaux, Cheverny, Chaumont, Chambord, Blois and Amboise. The last is of especial interest to doctors because it was here that the father of modern surgery Ambroise Pare was summoned to treat Francis II but Catherine de Medici delayed the proceedings until it was too late and thus had her own way over the two Guises. It is curious how often medicine is mixed in with history, Moliere who lambasted the doctors in his "La Malade Imaginese" and other plays, taken by a fatal stroke while preparing to take the lead in the above mentioned play, what an irony of fate!

One of the newest French books is by Dr. Maurice de Fleury of the Academy of Medicine, entitled "Le Medicine" (The Doctor) very interesting and one of the successful plays on the Paris stage is entitled "Knock" by Jules Romain, in which the medical profession is held up to ridicule ala Moliere.

And now to write "Finis" to vacation

days until the call comes again so vividly set forth in that poem loved by my friend, Dr. J. H. Dempster, called "Sea Fever" composed by John Masfield.

*"I must go down to the seas again,
To the lovely sea and the sky,
And all I ask is a tall ship and a star to
steer her by;
And the wheels kick and the winds sway and
the white sail's shaking,
And a grey mist on the sea's face, and a grey
dawn breaking.*

*I must go down to the seas again, for the
call of the running tide
Is a wild call and a clear call that may not
be denied;
And all I ask is a windy day with the white
clouds flying,
And flying spray, and the brown spume
and the sea gull crying.*

*I must go down to the seas again, to the
vagrant gypsy life,
To the gull's way and the whale's way where
the wind's like a whetted knife;
And all I ask is a merry yarn from a laugh-
ing fellow rover,
And a quiet sleep and a sweet dream when
the long trick's over.*

—John Masfield.

THE SURGICAL ATTACK ON HEAD PAIN

C. F. McCLINTIC, M. D.

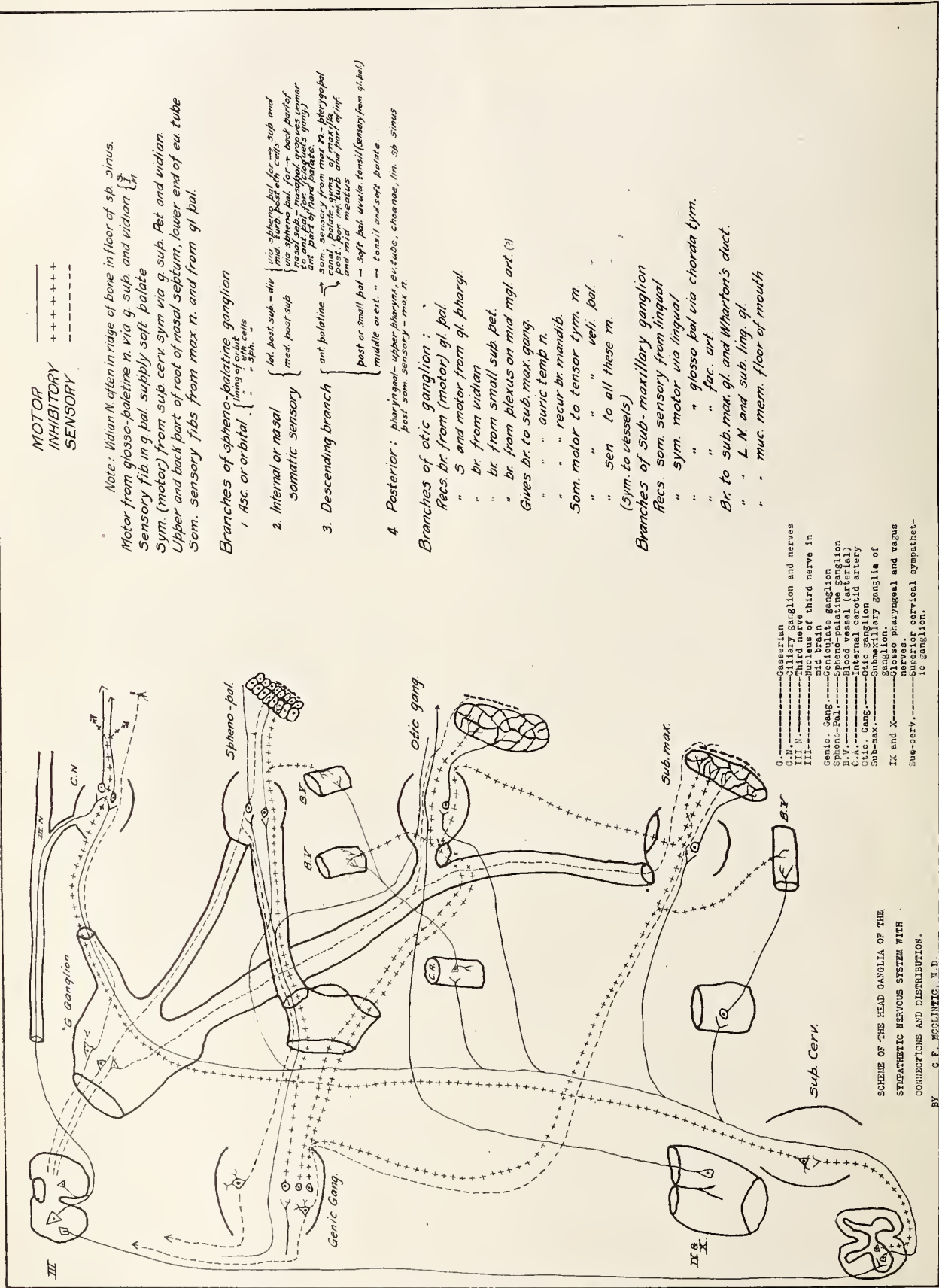
(Neuro-Surgical Service of Receiving Hospital
and the Detroit College of Medicine and Surgery)

DETROIT, MICHIGAN

For ages the relief of pain in the head regions has been one of the most baffling problems of the medical man. In most recent times, surgery has come to the aid of the internist in this most important problem. It came first with the injection of various substances into the nerves such as distilled water, phenol, glycerin, cocain, novocain and alcohol. These substances when injected into the nerve trunks and ganglia usually give relief for a longer or shorter period of time but none of them are permanent in their effect.

In order to secure either a permanent or palliative result (which is also permanent) surgical interference with the nerves or ganglia concerned must be resorted to. In order to form a basis for the surgical treatment of head pain a knowledge of the distribution of the nerves of the head is essential. Accordingly we have worked out the scheme of sympathetic and sensory innervation of the head as it appears in the accompanying diagram.

The important facts to be observed in relation to pain and the nerve distribution are:



1. The wide and extensive distribution of the pain or sensory fibers from the sphenopalatine ganglion. (a) This explains the frequency of "referred pains" (erroneously called "reflex pains") from

pathological lesions in any of the regions reached by nerve fibers from this ganglion. (b) This also indicates why treatment of these lesions often results in a permanent cure, e. g. correction of a deviation of the

septum will sometimes relieve a chronic headache or other head pain. (c) it also gives a rational basis for injecting the ganglion for head pain when the cause cannot be determined or, if known, cannot be removed.



Median section of nose, showing probe through left anterior nares passing over the inferior turbinate and entering beneath the fold of the middle turbinate at the junction of the posterior and middle thirds. This is the route used in injecting the sphenopalatine ganglion through the nose.

2. The other important point is, that sensory fibers to all the head ganglia pass via the posterior root of the trigeminal nerve. This gives us a basis for relief of pain arising anywhere within the region supplied by branches from these ganglia, by cutting the posterior root of the fifth cranial or trigeminal nerve.

A study of the diagram will also throw light upon many rather vague conditions which arise in parts quite remote from the regions involved, and will enable one to explain many of the trophic, vaso-motor, and visceral disturbances arising either in the head region, or in other visceral areas, as a result of the wide distribution and connections of the chain ganglia of the head, neck and upper thorax, e. g. asthmatic attacks are sometimes permanently removed by treatment applied to nose or to throat.

The chart is so constructed and the legends are so given as to make it self-explanatory. The accompanying photographic illustration illustrates the approach used in the injection of the sphenopalatine ganglion.

THE DIETARY TREATMENT OF PERNICIOUS ANEMIA*

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Recent developments in the treatment of pernicious anemia have entirely

changed the outlook for patients with this disease. The current general attitude of pessimism regarding the condition was presented by Evans¹ in a comprehensive monograph on pernicious anemia published in 1926. Even at that time, however, there were indications of a more favorable future for patients with this disease.

In 1923 Gibson and Howard² suggested the use of a diet containing liver, because of its apparent beneficial effect in cases they had been studying from another aspect. In 1925 Whipple and Robbscheit-Robbins³ demonstrated the value of liver in treating experimental secondary anemias. In 1926 Minot and Murphy⁴ reported a series of 45 cases of pernicious anemia treated by a special diet containing liver. They had produced remissions consistently by this diet and the remissions had persisted so long as the diet was continued.

We started treating pernicious anemia patients at the University hospital with a similar diet at that time somewhat less than a year ago. A series of 35 cases have completed their hospital treatment since then with results similar to those described by Minot and Murphy.

THE DIETARY REGIME

In their original article Minot and Murphy described a diet with the following principal features. We have used the same diet with only minor variations.

1. A daily allowance of 200-250 grams of liver. Calves liver is preferable, but beef and pigs liver may be substituted. Extra meat is given once a day preferably red meats or glandular organs such as kidneys and pancreas. In case of necessity, the latter may be substituted for liver for short intervals, but it is not certain that they contain the specific element present in liver, so they cannot replace it entirely. We are not using as much extra meat at the present time.

2. The fat content is restricted to approximately 70 grams daily for theoretical reasons. If such restriction is disagreeable to the patient a more liberal allowance may be given without any apparent ill effects.

3. The free use of fruits and vegetables is encouraged. A total intake of 2500-3000 calories is usually sufficient.

CLINICAL CHANGES ON THE DIET

Patients develop remissions with astonishing regularity on this regime. Co-op-

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eration is usually excellent for the diet is not restrictive and while many do not care particularly for liver, they are willing to eat it, because they know it will help them.

Within a few days after starting the diet, patients note a definite sense of improvement usually associated with an increase in appetite and followed soon by a progressive gain in strength. The general attitude and appearance reflect the improvement. Within a few weeks a normal range of basal activity may be carried on without difficulty.

During the first week the blood shows signs of increased bone marrow activity with the appearance of increased reticulocytes and other young red blood cells. This early activity is followed by a progressive and often rapid increase in red blood cells and hemoglobin. This increase varies with the individual, but in the average case the red blood cells and hemoglobin increase more than 100 per cent within the first 3-4 weeks and counts within normal limits are the rule after 2-3 months management.

Follow up observations thus far have shown that the remission persists if the diet is continued. One of our cases developed a relapse after discontinuing the diet for about one month, but promptly improved under further management. Patients must continue the diet if they expect to keep well and close supervision should be maintained after discharge.

PRACTICAL CONSIDERATIONS

The knowledge of what this diet will do makes the treatment of these patients a pleasure. To be able to promise relief if co-operation is given and predict more or less accurately the course of events produces an unusually favorable state of mind in the patient and those who have suffered under previous systems of management are particularly grateful.

It has been our impression that better results are obtained if the patient is placed in bed during the early stages of treatment. Due to local conditions most of our patients were hospitalized during treatment usually for a period of 3-4 weeks. A subsequent convalescent period of 1-2 months has been advised with another examination at the end of this interval to determine individual fitness for further activities.

It is important to correct irritating factors such as poor teeth, ill fitting false teeth, lack of false teeth, local sepsis or any other process which interferes with

the normal ingestion of the diet. Special preparation of the liver as well as the remainder of the food is frequently necessary in these cases.

Hydrochloric acid was given in most cases, but several did not receive it and improved just as well. When it relieves gastro-intestinal symptoms, it is of value.

The marked response to the diet suggests that liver supplies some specific substance which is absent in pernicious anemia. This is important, because in very weak patients or those with a very poor appetite, the liver should be eaten first and then as much of the other food as is desired. This is usually successful and as the condition improves the appetite increases proportionately.

Appetizing methods of preparing the liver are a great help and a variety of recipes offers the best means of overcoming the monotony of the diet.

In a few cases, the condition on entry was so poor that even the liver could not be given. Preliminary transfusions in these cases supplied sufficient strength to start the diet and subsequently all developed remissions. Two patients entered in a moribund condition, dying despite transfusions and before liver could be given.

The various phases of the disease respond differently to treatment. The improvement in the blood is much greater than that noted in the nervous system. In fact improvement noted in the latter can usually be accounted for by the improved circulation and state of nutrition. However, a final opinion can not be given regarding this at the present time. Whether the cord changes will progress or develop if not already present, while on the diet, is an interesting question. It is interesting to note in this connection that the achylia persists during the remission as it does during those which develop spontaneously.

The original work of Whipple indicated that such a diet would benefit secondary anemias. We have treated several cases with variable success. When the primary cause can be found and treated the response is satisfactory. One encounters very frequently anemias of atypical character and it is often difficult to decide whether the condition is pernicious anemia or not. If such cases do not respond after a satisfactory period of dietary management, it is reasonably certain the condition is not pernicious anemia.

In secondary anemias, some form of iron

should be given with the diet. Blaud's pills are satisfactory, although recent work indicates that ferric salts such as ferric citrate are better. Hydrochloric acid may be given if achlorhydria is present. Treatment of the underlying condition is of course fundamental.

The amount of liver required to maintain a remission is unknown. We have continued the same diet until the blood is within normal limits and thereafter advise 100-150 grams a day. Some of our patients have found it difficult to secure fresh liver daily. Cooking several days supply ahead has been satisfactory.

This difficulty plus the monotony of eating liver every day has led to several attempts to obtain satisfactory extracts. Dessicated liver preparations are available, but the dosage is unknown. One of our cases developed a remission on 12 grams of dessicated liver daily. Recently Cohn and Minot have reported the isolation of the essential principle in a protein free fraction of liver. This preparation is now being tested in a group of selected clinics before being released for general clinical use. It will of course be a great advance and will eliminate practically all the shortcomings of the present management.

In conclusion, it may be conservatively stated that the present dietary treatment of pernicious anemia constitutes one of the outstanding advancements in medicine. The use of liver produces remissions by a mechanism as yet unknown. To maintain the remission, the use of liver must be continued indefinitely. If discontinued for very long, a relapse is practically certain.

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EXERCISE IN THE TREATMENT OF PULMONARY TUBERCULOSIS

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All students of pulmonary tuberculosis are agreed on the importance of rest in the treatment of the disease, but have diversified ideas as to the length of rest. There is little accord upon the importance

of exercise. The large percentage of patients discharged from sanatoria as quiescent or apparently arrested, who subsequently break down, presents a serious problem. This failure is often due to the lack of a period of hardening by carefully supervised graduated exercise which is a means of acquiring resistance. The best method of controlling the toxemia and the systemic disturbances is rest. The best method of inducing healing in a tuberculous lesion of the lung is rest. Sufficient rest is very important at the beginning of treatment. Valuable and essential as it is, rest can be over done. We must remember that the majority of patients in municipal sanatoria come from the working classes. It is our problem to restore their working capacity, for without that life to them is useless and a misery.

The average stay in the sanatorium is 12 months. This is a minimum for all cases in the incipient and moderately advanced stages of the disease. Far advanced cases remain a much longer period. Complete confinement to bed necessitating the use of the bed pan should be insisted upon as long as there is evidence of toxemia. Evidence of toxemia consists in elevated temperature, tachycardia, true night sweating, and continued loss of weight. In particularly obstinate cases of fever, immobilization treatment should be tried. The patient is kept recumbent with only one pillow. He is not allowed to sit up or do anything whatever for himself; he is fed by his nurse; he is not allowed to read, or to be read to; and, of course, has no visitors except his doctor and his nurse. This is drastic, but, in many cases, surprisingly effective. If successful it will usually be so fairly quickly, and it is obviously a method which the patient will not submit to very long. If this method does not bring about a complete, or, at any rate, a marked control of the toxemia, the patient has a poor prognosis even in regard to improvement, and requires hospitalization.

Not the extent of the lesion but its quality is the decisive criterion as to the indication for rest and exercise. In patients with a favorable prognosis the maximum amount of healing usually occurs within six months of bed rest. If the lesion is predominantly exudative a longer period of rest is necessary, because we must wait until it has become resorbed or changed into the productive form. Most of the purely exudative processes we see are in young adults, usually under 25 years of

age. Their sputum is positive upon admission to the sanatorium, and remains so. These cases are almost always moderately advanced or far advanced with only a slight tendency towards fibrosis. The prognosis is always poor. It is not so important whether an open or closed tuberculosis exists, as to whether this open case becomes closed. Likewise, the extent of the lesion is not of so great importance in prognosis as the tendency towards fibrosis. A large percentage of the patients in sanatoria are cases of chronic fibrosis which with properly graduated exercises will in time be able to return to their work. Those in the third stage of the disease, who have been ill for two or more years and whose disease is stationary and does not give rise to symptoms or signs of auto-inoculation, do better on exercise than those in the first stage of the disease. A certain percentage of patients in the third stage shed tubercle bacilli at all times, but are free from constitutional symptoms. They are kept in sanatoria in order to prevent the infection of others, but they can well be up four or five hours and take care of themselves, and often they are able to work about the sanatorium and thereby contribute to their maintenance. The pathological anatomical changes in the lungs are not of so great importance in these patients as the determination of their working capacity, especially if they are to be returned to an economical basis. This can only be determined by exercise tests. Cavities are no contraindication to such tests.

The therapeutic value of graduated exercise lies in the fact that it increases the patient's general strength, giving him better muscle tone and also strengthening his heart muscle. In slowly graduated exercise an auto-tuberculinization occurs. One theory to account for this states that the circulation is increased and the areas about the tuberculous foci become more vascular. Small amounts of tuberculin are then poured into the blood stream, thereby stimulating fibrosis and increasing the patient's resistance. Experimental studies as well as clinical experience indicate that the work of the right heart is increased only in extensive pulmonary disease. Patients who die of pulmonary tuberculosis usually show some hypertrophy of the right ventricle.

Where the cardiac muscle, aside from the toxemia, is taxed by such complications as chronic bronchitis, bronchiectasis, emphysema, and pneumokoniosis, exercise is

contraindicated. Patients with intestinal tuberculosis and those subject to hemorrhage and pleurisy should take no exercise.

At Tegtmeir's clinic most of the patients are men from the working classes in whom the disease is moderately or far advanced. When all signs of toxemia have disappeared and they are able to walk for an hour, they are started on exercise out of doors. He points out that giving the drills out of doors not only tones and brings into play certain skeletal muscles, but that it improves the breathing and increases the vital capacity of the lungs and strengthens the heart muscle and other organs. The air hardens the skin, giving better vasomotor tone. His patients are divided into three groups, all starting in Group I. The drills are held daily out of doors unless the temperature goes below 19 degrees C. in the shade, and are usually started after the rest hour. Only a loin cloth is worn by the patient. The exercise in Group I comprises marching and movements of the arms forward, upward and sidewise to definite counts. The patients are moved up and down in the groups according to the manner in which they react. Many patients remain for an indefinite period in the first group. Each case receives individual observation and management. Rectal temperatures are taken one-half hour after the drill and a careful record of the temperature and pulse is kept. Physical examination and X-ray studies are made at frequent intervals. In this way one soon learns just what a patient can and cannot do. When there are no constitutional symptoms, no change of physical signs, the patient is slowly worked into Group II. The exercises here are the same as in I, with the addition of the movement of the legs, with special attention to breathing exercises. In patients where pleuritic changes have occurred forceful inspiration is contraindicated. Rest periods are often called during the drills and the duration of the exercise depends upon the individual's reaction. No patient receives more than a half hour exercise at a time. The same observations are made as in Groups I and II before the patient is put into Group III. In the last group the drill is as in Groups I and II with the addition of thoracic movements where all the skeletal muscles are brought into play. When an individual can go through Group III exercises for six weeks with no shortness of breath, no signs of fatigue, the physical signs showing no change and

serial roentgen ray studies revealing no new pathology, the patient may with a fair degree of safety be discharged as fit for work. To recapitulate, all cases must be carefully selected. The work must be under the supervision of a physician. It is not the training of groups, but individuals. Favorable results have been obtained from this form of prescribed exercise.

In prescribing exercise we have to consider those patients who were in good physical condition and afebrile from the beginning of treatment; and secondly, those patients who were treated by absolute bed rest on account of fever. At the beginning of treatment all afebrile cases who have well defined active physical signs of pulmonary tuberculosis and who at the same time are in good physical condition, but who do not need strict bed rest, are treated with rest in bed during the morning and afternoon rest periods. They are permitted bath room privileges and may sit up between the hours of 11 a. m. and 1 p. m. and between 4 p. m. and 6 p. m. This routine is carried out for from one to three months. These patients are not allowed any other form of exercise. They should have no signs of active disease in the lungs when they begin graduated walking. Patients in poor general condition and with fever at the beginning of treatment should be treated by absolute bed rest until the temperature and pulse become normal and remain so for a period corresponding to the febrile period. During the afebrile period in bed massage should be given in order to restore muscle tone. In favorable cases the too frequent pulse becomes gradually less frequent and harder, always a sign that the blood vessels are stronger and the circulation is better. The patient may be permitted to rest in the reclining chair. Should any of these bed patients have relapses of fever or other complications, walking exercise should be postponed. The length of time this postponement should last will depend on the severity of the relapse. If it lasts for three or four weeks it is a good rule to keep the patient in bed for two or three months more. This, however, must be left to the judgment of the physician. With but few exceptions the rate of the pulse is as good an index of the patient in regard to exercise as any. So long as it is 90 or more per minute, or it is accelerated to that rate by mild exercise, the prognosis is not good. The question may well be asked, what standards are to be used in the correct grading of exercise? This is

a difficult question to answer with exactitude. Personal experience is necessary, but the method of procedure can be analyzed down to fairly definite rules. Exercise may be slowly increased as long as all signs of systemic disturbance are absent; that is, as long as a carefully kept temperature and pulse shows no definite abnormality, as long as the body weight change is satisfactory and as long as a careful questioning of the patient elicits no feeling of malaise.

Careful study of the temperature and pulse charts should be supplemented by more minute testing of these phenomena after definite amounts of exercise. It is very important to examine the patient immediately after his afternoon exercise, making notes of his general appearance, looking for fatigue, undue perspiration, paleness and cyanosis. The pulse, respiration and temperature are then taken, and after a five minute rest interval the pulse rate is taken again, and again after half an hour interval. In this way one can classify the patients under three headings. (1) Those with a normal pulse, respiration and temperature; or moderate rise of pulse and temperature, which returns to normal within five minutes. (2) Those with an unduly rapid pulse or raised temperature, which do not return to normal in five minutes, but do so in half an hour. (3) Those with rapid pulse or raised temperature, which do not return to normal in half an hour. Patients on exercise should never show a temperature maintained for half an hour. The question may arise, just what is normal temperature? An occasional rise to 99° in males and 99.6° in females is considered to be within normal range, according to the rule followed at the Trudeau Sanatorium. The pulse rate must be considered in relation to each case, as tachycardia is not necessarily evidence of intoxication; that is, when the heart is working under abnormal conditions because it is displaced by artificial pneumothorax or by fibrosis, definitely placing an obstacle on the pulmonary circulation, decreasing the alveolar ventilation. The patient's first form of exercise is usually a walk to the bath room. The first few times the pulse may go up to 120 and sometimes to 130. A pulse of 120 at the beginning of exercise is not necessarily a bad prognostic sign. It is more important to determine how long it takes the pulse to return to a normal range. If each day the pulse remains more and more within normal range the bath room priv-

ileges may be increased. When the patient's chart shows a normal temperature and a pulse rate of not over 100 he should have all bath room privileges and be started to meals. Often the physician is puzzled as to which meal to send the patient. If the patient has a rise in temperature it is most likely to occur in the afternoon. Therefore, it is not advisable to send him to the dining room in the evening. Breakfast and the noon-day meal are preferable. If the patient goes to the noon-day meal he will usually rest longer in the morning. Going to meals is not always considered as exercise by patients. When asked how much exercise they are taking, they often reply. "A ten minute walk." Upon further questioning one often learns that they are also going to all meals. Taking meals in the dining room is exercise, because it means that the patient must get up and dress each time. When patients are going to all meals they should be started on walks. These walks should be increased according to the patient's physical records. Walking is the usual form of exercise prescribed for sanatorium patients. Graduated labor as distinct from graduated walking, was first used as a routine sanatorium procedure in England by Marcus Paterson. In grading the work, he prescribed practically any kind of work that could be done under sanatorium conditions. In Grade I the patients carry small baskets, weighing about seven pounds, varying distances up to three miles. In Grade II light hoeing, hand weeding, and light painting were prescribed. No rapid work is allowed, and no work involving the sudden or continued application of great physical effort such as lifting, axe work, or straining with a heavy load in a hand cart. All work must be done without any distress, dyspnea or palpitation. The results obtained from this graded labor were, on the whole, as good as the results obtained at other sanatoria.

It is most important that no patients be considered for discharge until they are able to work six hours each day and are free of all constitutional symptoms. There are very few places that have sheltered employment for the tuberculous. In most instances when a patient leaves the sanatorium he must compete with healthy men in a factory on an eight-hour day basis. If he is not trained for the task he will soon have a relapse.

Most sanatoria have a supervisor of reconstruction. Occupational therapy may be divided into three parts, which are

practically three stages in its remedial application. (1) Divisional therapy, in which simple amusements, such as games and puzzles, are used to occupy the fingers and divert the mind. (2) Occupational or handicraft therapy, in which definite tasks are assigned, involving the doing of useful things with woods, beads, textiles, clay, metals, etc., for the purpose not only of occupying the mind, but of assisting in the restoration of lost or weakened function. (3) Prevocational training, in which the prescribed remedial agents are employed for the distinct and studied purpose of leading up to definite education and training for some industry or trade. Only a few sanatoria are able to give their patients free vocational training. There is no greater fallacy than the advice to tuberculous people to get light out of door employment. There is almost no such thing as a light out of door job. If it is found it will also be discovered to return a light pay envelope. But good wages are necessary for the healthful maintenance of a tuberculous man and his dependents. The records of the Gaylord Farm Sanatorium showed that the factory workers held their condition distinctly better, and the office workers far better than did the out door worker.

The National Tuberculosis Association's Advisory Committee to the Federal Board for Vocational Education came to the conclusion that it was necessary to offer certain standards or factors to be considered in counseling with the tuberculous. Those adopted are divided into four main groups, each with five subheads: The factors in Group I relate to the personality of the patient, (1) his present health, particularly as to the amount of damage done by the disease processes, and the degree of arrest shown by the medical records; (2) temperament and education, for it is necessary to know whether he is "high strung or phlegmatic, stupid or quick of perception, and the extent of his education and training"; (3) his hopes and ambitions must be taken into account; (4) age will have a direct bearing on vocational education; (5) the sex of the patient must be considered, both for training and placement.

Group II comprises the factors due to conditions of work. (1) Is it active or sedentary in character; indoors or outdoors; heavy or light; involved or simple? (2) Attitude and position are important, for any work requiring a continuous stooping or strained position would be unsuitable. (3) Time, duration, and pauses: is

it to be day or night work? It must not be seasonal, requiring intensive application at certain times of the year. Speeding up is dangerous. Tuberculous people should not work more than eight hours daily; some must work less. (4) Fatigue, tension, and responsibility; lifting of heavy weights and vigorous exertion of the upper extremities must be avoided. Continued nerve strain and too much responsibility are dangerous. (5) Are wages on the per diem or piece work basis, and are they adequate for the patient's needs?

Group III comprises factors due to materials and processes; the kind and quantity of (1) dusts; (2) poisons; (3) gases and fumes; (4) infectious material; (5) dangerous machinery and appliances.

Group IV comprises the factors involved in the place of work. (1) Tuberculous cases should not work in high winds nor under a burning sun, nor in slush or rain, nor in super-heated shops. (2) The construction of the work place: flooring is an important item. Basements, underground areas, and overcrowded shops should be avoided. (3) Air: ventilation, temperature, and humidity; (4) light and illumination; (5) sanitary comforts must all be considered.

CONCLUSIONS

The value of rest has been well established, but little mention has been made of the importance of graduated exercise in the treatment of pulmonary tuberculosis. Graduated exercise has a definite therapeutic value in restoring the patient to the community as a fit working unit. These patients must be carefully selected and under the supervision of a physician at all times.

ABORTIONS

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The treatment of abortions can and should be standardized. It has been noticed that in private institutions where many men handle cases, these cases are treated in as many different ways often with serious results. It is also noticed that in public institutions where the patients are under control of a common plan of treatment, according to the teaching of one particular principle, the results are uniformly better.

The first consideration of abortion to the patient as well as to the doctor, is hemorrhage. This should be considered from two

points of view: the immediate seriousness and the remote seriousness.

When the hemorrhage is most alarming the surgeon will frequently treat such a case radically, when such hemorrhage can and should be controlled by more conservative means.

In reviewing the statistics one will be struck with the absence of death from hemorrhage during the early months of pregnancy. A statement from F. Adair in a large clinic of patients, never saw a single death from hemorrhage. Hegar never saw a fatal case of hemorrhage in the early months of pregnancy. In an analysis of some four thousand cases in a Frankforter Clinic not a single case died from hemorrhage. It may be concluded that death from acute anaemia is rare or impossible in the first three months of pregnancy.

The remote dangers from hemorrhage is serious and every means should be resorted to control this hemorrhage. If the patient has become anaemic because of this hemorrhage she is more liable to infection. Because of this remote danger it should give the surgeon no excuse to enter the uterus with his hand or any other instrumentation. The attendant should prepare himself and cause the patient to be prepared with most rigid technic. The vagina to be examined for membranes and if a portion or all of the retained secundae are within the os, this may be carefully removed without entering the uterus. The vagina and cervix may then be firmly packed, the packing to be removed in twenty-four hours, when the products of conception will be discharged or easily removed from the cervix. Ergot is not advised in these cases, it seems to immediately aggravate the hemorrhage; codeine does not arrest the hemorrhage and should not be used in place of morphine (Adair).

Two series of cases were taken, one according to the teachings of a common plan and another group of cases that were treated by many different men. The first group, 217 cases, the second group, 115 cases. Of the first group not one was treated with immediate dilatation and curettage; of the second group 66 had moderate or severe hemorrhage, 33 had immediate dilatation and curettage. In the first group of 217 cases brought to us from the poorest hygiene and poorest surroundings, none of which were treated with immediate dilatation and curettage, not one death resulted. Of the second group 115 cases, with no organized routine, there were five deaths.

I have classified abortions under the following headings: "Threatened Abortions," "Induced Abortion," "Inervitate Abortion," "Infected and Non-Infected," "Incomplete Abortion with Infection or Non-Infection," and "Complete Abortion," each heading to be discussed alone.

THREATENED ABORTION

In threatened abortion a great deal of blood could be lost and the patient still go on to term. Cases treated in an expectant manner may often turn out to be only threatened abortion when inevitable was expected, so many cases are treated operatively when expectant treatment should be tried. Any case of pregnancy associated with backache, moderate hemorrhage, etc., should be treated as threatened abortion and kept in absolute rest in bed. Avoidance of cathartics during pregnancy should be strictly observed for many abortions may be precipitated by this means.

If hemorrhage has failed to stop after rest in bed, morphine and by other conservative means, and definitely established as inevitable and there is no temperature, no leucocytosis and no other evidence of infection, with strictest surgical technic the uterus may be emptied. Plenty of time should intervene to determine positively that the abortion is inevitable and that there is no evidence of infection. In this series of cases, thirty cases of threatened abortion which carried to term.

INEVITABLE ABORTION

It is often difficult to state when a threatened abortion becomes inevitable. The discharge of odorous fluid, escape of amniotic fluid, bits of membrane will definitely decide it to be inevitable. If there is no evidence of infection, the absence of temperature and leucocytosis, with proper technic there is no danger in emptying the uterus. In this series, fifteen cases classified as inevitable, nine of these cases were non-infected.

INEVITABLE ABORTION WITH INFECTION

If there is serious hemorrhage it should be controlled by vaginal packing, to be removed within twenty-four hours, when the uterine contents may come away or be easily removed. In infected inevitable cases without hemorrhage the patient should be left alone until afrebile for several days. In any case in which the uterus had been entered it should not be subsequently re-entered. If a slow bleeding continues, wait until the temperature and leucocytosis are normal and all tenderness considered, then intervention if necessary.

It is relatively safer to use instruments in the uterus under ten weeks than later because the uterine wall is much firmer. It may be necessary in cases beyond eight weeks to use vaginal packing, bougie or bag before uterine contents can be removed which should be done carefully with forceps or finger. The use of the curet should be avoided in these cases.

INCOMPLETE ABORTION

McPherson figures that about 13.7 per cent of cases are complete, leaving about 86 per cent incomplete. The incomplete abortions according to Williams, have a ratio 5:1 in hospital cases and about 3:1 in general practice. Paul Titus estimates 66 per cent are incomplete. Some authors go so far as to state there is no such thing as complete abortion. Veneberg in an analysis of 287 cases of incomplete abortion at Mt. Sinai hospital found 60 with a temperature from 101 to 105. All of these cases were curetted as promptly as possible after admission. There were two deaths, making a mortality of 3 per cent. In our series there were sixty-five cases with temperature of 101 to 106. None of these were curetted immediately. There were no deaths. In our series eighteen were curetted only after temperature and acute symptoms were subsided.

Hallis studied a series of cases at the Cook County hospital, analyzing 200 cases which had a minimum temperature of 100 on the day of admission. They were divided into two groups of one hundred cases each. In group 1 the uterus was emptied artificially and promptly; in group 2, treatment was expectant. He found that the cases treated expectantly had fewer days of fever; shorter days in the hospital and a lower mortality. He concluded that no patient should be operated unless the patient is afrebile for at least five days. The uterus could then be emptied for continued hemorrhage. Results are as follows: Cases treated expectantly have a lower mortality. The number of days in the hospital are shorter and the convalescence is also shorter. Nonseptic cases should be curetted as a routine, because (1) 40 per cent have to be curetted, (2) curettage insures an empty uterus and prevents subsequent bleeding, (3) it shortens the stay in the hospital, procedure is relatively harmless and accomplishes good. The average number of days of temperature running from 100 to 106 was seven days. After the patient becomes afrebile it is possible to discharge them from six to twelve days. If an afrebile patient who has been hemor-

rhaging, is curetted she may be discharged in five days. We have in our series, 60 cases of induced abortions, of these 33 were septic.

It is advised by some (Boldt) for incomplete abortion, hot antiseptic douches. This procedure and the possibility of disseminating infection is increased. So far as hemorrhage, in relation to incomplete abortion is concerned, we have already indicated that the immediate danger from hemorrhage is practically none, there being no fatal case of hemorrhage in all series of cases. The remote danger from hemorrhage is slight unless infected. The important point of attack in these cases is not so much to control the hemorrhage as to prevent infection. The cases of abortions which usually are infectious are self induced, criminal abortions or those cases of spontaneous abortion which are subjected to vaginal manipulation, without vaginal manipulation the percentage of infections from abortion would be almost none. When vaginal examinations are indicated, it should be conducted with the most careful aseptic precautions.

We can safely conclude that retained products of conception except so far as they provoke hemorrhage, are in themselves not dangerous to the patient. Incomplete abortions are not dangerous unless infected. Briefly, the treatment of incomplete abortion infected, consists of expectant treatment interference only to control bleeding, rest in bed, plenty of fluid, good food, and an abundance of fresh air.

COMPLETE ABORTION

This case rarely presents much difficulty from the standpoint of hemorrhage. Non-infected cases require no treatment except rest and general hygiene measures. Infected cases should never be treated actively except for drainage of the uterus, when malposition exists and drainage of the localized abscesses. In a total of 210 abortions, 55 abortions were complete, 8 of these cases were infected and 47 were non-infected.

We have had six cases of therapeutic abortions during the year. Many cases of threatened abortion will not reach inevitable abortion if proper care and instruction is given to the expectant mothers. Many mothers have one abortion and many will have another unless properly cared for. McPherson found that 27 per cent of the cases having abortions gave history of previous abortions. Thirty-nine in one series had previous abortions or 14 per

cent. We had 210 abortions and 1068 births in this hospital, a ratio of 1:5.

The treatment of repeated abortion requires careful study to determine the cause. Too frequent repetition of pregnancy, especially repetition following abortion. At least six months or a year should take place before subsequent pregnancy should take place. Mechanical conditions of the uterus such as malposition cervical lacuation are a factor in many cases. Twenty-three of our cases had uterine pathology.

Infection and infectious diseases may be causative factors. Twenty-four had various forms of infectious diseases such as G. C., lues and acute infections.

Syphilis has been overestimated for an early cause of abortion. This disease is more disastrous in the latter half of pregnancy. Only five cases in our series had demonstrable syphilis.

Prophylactic treatment in the most cases is the removal of the cause when the cause can be found. The avoidance of strain or undue fatigue, improvement of the general condition of the patient, administration of corpus luteum in selected cases, rest in bed, uterine sedatives, avoidance of undue emotion and excitement of any kind.

SOME REMARKS ON MEDICAL TEACHING IN SWEDEN, ESPECIALLY CONCERNING OBSTETRICS AND GYNECOLOGY

ELIS ESSEN-MOLLER, M. D.

Professor of Obstetrics and Gynecology at the University of Lund, Sweden

When you are facing an old Swedish Professor of Obstetrics and Gynecology, I suppose you are not especially interested in hearing a lecture on some topic which you can hear just as well, or better, from your own teachers or read in your excellent American text-books.

I prefer to give you something that you don't find in your books, namely, a short account of how our medical studies are arranged in Sweden, especially concerning obstetrics and gynecology, in order that you can compare with American conditions and draw your own conclusions. I only ask you to be lenient with me, both because I can't speak your language fluently

* This paper was read before the students of Detroit College of Medicine and Surgery at the invitation of Dean MacCracken, during the Clinical Congress of the American College of Surgeons, October 1927. As it seems of unusual interest, though never intended for publication, I have the writer's permission to do so.—B. H. Larsson, M. D.

and because I did not know until two days ago that I had to give this address, which therefore necessarily must be a short one.

Sweden has only three universities with medical schools, Lund, Stockholm and Upsala, but in spite of that Sweden has, of all civilized countries I know of, the longest medical studies, as they cover a period of eight to nine years. Thus a student, who begins his medical studies at 18 years of age, cannot expect to pass examination before the age of 26 or 27 years. If he wishes to specialize in any line, he has to get the special training, and thus reaches 30 years or more before he is ready to practice. If this is an advantage or disadvantage, I shall not enter upon here. I can only tell you how it is and will try to explain it.

The studies are divided into two parts, giving two separate degrees. The first one which we call the Candidate of Medicine, contains only the theoretical subjects, anatomy, physiology, chemistry and so on, and requires about four years. Only after that examination is a student admitted to the second part, which we call the Licentiate of Medicine, and which contains the clinical subjects, internal medicine, surgery, pediatrics, etc. and which requires four to four and a half years. Until he has passed this second examination, he is not allowed to practice.

Now, what characterizes the second part of the studies and what causes it to take so long a time, is the obligatory clinical training in the hospitals. To make this clear let me tell you that this clinical training takes ten months for surgery eleven months for internal medicine, three months for pediatrics and so on. As the students are not allowed to combine more than a few of these subjects, you will understand why our studies take so long a time. As compensation the students get a very thorough and good training in the different lines before they are beginning general practice.

If I, now go over to my special line, obstetrics and gynecology, I must first tell you two things. First, that obstetrics and gynecology are united in Sweden, not divided, as here in America and England. In Sweden they form one subject. The professor is teaching both of them, as we think it artificial to separate them and not good for the teaching. Secondly, that the professor of obstetrics and gynecology, when appointed to that chair, becomes at the same moment chief obstetrician and gynecologist to the corresponding Univer-

sity hospital. We have practically no private hospitals in Sweden—all of them are run by the government or the state. The professor has a very good and solid position—he has all his patients in the hospital, even the private ones; he can devote all his work to one place, where he does the teaching, the operations and all things necessary. He cannot be dismissed, but he must retire at the age of 65 years. He is, as you call it here a full time professor, who is not required to split his work or his energy between separate places; no private hospitals, no nursing homes, only the University hospital—that is all.

You will be interested to know that the clinical material, the number of cases, is very good and sufficient for the teaching. That is due to a very remarkable change of public opinion, which is going on since rather a long time. The women now understand that the parturition can be attended with complications and are therefore well aware of the fact that delivery in a well equipped hospital means an added security as compared with the delivery in their homes. What is remarkable is that this does not only hold good with the poorer class of people, but to the same large extent with the well-to-do women from the upper classes of society, who in increasing number seek the aid and quiet of the hospital.

A very important contributing fact is that the costs for the patient in our hospitals are very low. In the general wards, our patients pay up to three or four Swedish crowns—that is about \$1 a day, and besides that, the professor has the right to relieve up to 20% of the patients from paying if they are unable to do so. The private patients pay an amount of about \$3 per day. During my stay in the United States, I have seen hospitals where private patients pay \$25 to \$30 per day.

Now, this proves that our clinical material is good. My department at the University hospital in Lund has 108 beds and has every year 2,700 patients, of which 1,800 are obstetrical cases. It may be of interest to you to add that during the last 10 years the number of children born in the Swedish Lying-in hospitals has increased from 15 to 30 per cent. It is also quite certain that this increase will go on in the same manner and it is rather to be expected in the future that more children will be born in the hospitals than in the homes.

Now as to the training of the students in obstetrics and gynecology—they must

do four months work in the hospital. Every four months, eight students are admitted at a time. During those four months they live in the hospital as internes and what seems very important, they are not allowed to occupy themselves with any other subject or any other clinic.

During the first two weeks, they get an introductory teaching in normal pregnancy and labour and then a training in performing obstetrical operations on manikins. After that, they are admitted to attend normal labours in the delivery-room, at first under the supervision of myself or my first assistants, but later independently and on their own responsibility. In Sweden we think that it is most important that the students get their training in practical obstetrics in the hospital before they are going out into practice. It is safer for the patient and it is safer for themselves.

In the same manner, they are allowed to make an application of forceps or a version, of course under supervision, just as they are obliged to call on the resident doctors in any abnormal case. Furthermore, they have to join in the professor's daily visit in the wards, to make the records and the ordinary examinations, and to be present, by day or by night, at operations for obstetrical interferences.

This arrangement has prevailed in Sweden since about 1850 and now I suppose you are interested in the results. Well, I can't tell you about the result of teaching, because I am myself a part of it. But I can give you some figures to explain what it means. Every student at the end of the four months has himself conducted an average number of 45 normal labours; has made one or two applications of forceps, a version or other obstetrical operation and about 60 gynecological examinations. We think that gives a certain guarantee, that he is able to make a gynecological diagnosis, and to conduct safely the labour to the satisfaction of the mother and of himself.

I remarked in the beginning that our medical training is very long; many people think it too long, and that it ought to be shortened. It may be so—I don't deny it, but it is interesting to note that notwithstanding many suggestions in that direction, nobody as yet has suggested any alteration of the time-honoured arrangement of the obstetrical and gynecological teaching, which has now stood the test for more than half a century.

I should perhaps also try to give you

a glimpse of the characteristic features of Swedish obstetrics and gynecology, such as I understand them. The Swede is cautious and reserved. New schemes are taken into consideration and carried out only after thinking it well over and after getting the conviction that they can't do the patient any harm. Also the respect for and confidence in the work of nature, itself, is deeply rooted in the Swedish obstetrician, and the unnecessary interference is looked upon as what it really is, a superfluity. A suggestion such as doing a version at ordinary parturition, only in order to shorten its course, is simply unthinkable in Sweden.

Another example is the symphyseotomy, which at the end of the last century witnessed its revival. It has never gained ground in Sweden. The admirable construction of the pelvic girdle is too respected to risk making a fissure in it, and we are suspicious of the risk of producing deliberately a complicated fracture. That is the reason why there have only been a few operations of this kind performed in Sweden, and why they have not been followed by others. Not even during the climax of the popularity of symphyseotomy or the hebosteotomy could it gain a footing in Sweden, although not to perform it was almost regarded as a sign of being left behind. I think that the experience has shown that we are justified in our reserve.

This reserved position with regard to the operation does not depend upon a fear of surgical interference by itself, for the surgeons at the hospitals in our country have a thorough surgical training, and their results can stand comparisons with those of other countries.

Similar phenomena are met with in the gynecological line. We have not but in rare exceptions, wanted to try the new narcotics in the form of intravenous or rectal narcosis which have seen the light in recent years. It seems to me as if the critical reserve even in this line has been safer than a premature experimenting which has in some cases already proved to be followed by serious drawbacks.

In this connection I cannot help mentioning a case of which the opinions may differ, that is of the surgical treatment of the retroflexed uterus, such operations are not but exceptionally made in Sweden, for we do not believe in the clinical significance of the retroflexion, and as a consequence its operative treatment is out of the question.

I could continue to enumerate several examples of this critical reserve which, according to my opinion, characterizes the Swedish obstetrics and gynecology. Its weakness is to be found in the fact that with such an attitude against new ideas, the Swedes are not among the first to publish their experiences with new methods, but in that respect keep in the background. Its strength, however, is just as obvious; it consists in the greater security of the patients, who are now subjected to experiments with new methods until these, after a careful examination, have proved to be both harmless and advantageous. Such a standpoint seems to me reasonable, even from a scientific point of view, in the sense, that it does not very easily give rise to reverses but gives a certain confidence in an even and continued evolution.

Before finishing I wish to add a few words to you, upon whose shoulders many of the tasks of the future are to be laid. What has interested me very much during my stay in your country is the very great difficulties you have to grapple with in medical teaching and standardization, but also the energy and the enthusiasm with which you attack them. There is no doubt, I think, but that you will conquer them thoroughly and splendidly. But don't forget, my young friends and colleagues, that organization of teaching and of hospitals is not all. The main point is the spirit which penetrates them. The medical profession demands conscience, feeling of responsibility, devotion, unselfishness and charity. If those qualities are predominating in the doctor, then, and not until then, is he what he ought to be. Then he has something more than a profession—a calling for which it is worth to live and to die, for there is nothing more noble, more high or more heavenly on earth than the privilege to relieve something of the suffering of mankind.

PLEXIFORM NEUROFIBROMA OF THE MEDIAN NERVE—

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GLEN AMOS BROUGH, M. D.

DETROIT, MICHIGAN

J. E. LEHMAN, M. D.

WINNIPEG, CANADA

CASE REPORT

History—Patient, white, 22 years old, sheet metal worker, first noticed a swelling in the palm when seven years old. This caused no trouble until it began a rapid enlargement a few months previous to our observation (June 21, 1926). With the increase in size, pain and numbness were

observed. "Pins and needles" sensation after holding any object tightly, aching at night and in the morning, and a progressive loss of power of the hand were also noted. Numbness in the hand brought on by holding something tightly would disappear if the hand was held down and shaken.

Examination—Left palm revealed two swellings, one about 4 c.m. in diameter, between the first and third metacarpals and overlying the second metacarpal, and the second smaller mass between the thenar and hypothenar eminences at the bases of the metacarpals. No signs of inflammation. The skin moved freely. Masses were firmly fixed in place. The larger mass had a very definite palpable outline and was smooth and tense. The smaller mass was more irregular, more closely applied to the skin and had a "doughy" feel. Flexor tendons were free. No changes in the circulation of the fingers could be observed. No muscle atrophy, although the grip on this side was distinctly weaker. Pressure over the larger mass caused a pain and a paresthesia in the hand, but no local pain and no radiating or referred pain along the course of any nerves. General physical examination was negative. There were no other enlargements in the subcutaneous tissues nor along the nerve trunks.

X-Ray—Stereoscopic anterior-posterior plates showed normal bones and joints and a well defined soft part shadow in front of the second metacarpal (Plate No. 3).



Figure 3.

X-ray A. P. View, Showing Shadow of the Mass over the Second Metacarpal.

TREATMENT

Operative removal was undertaken through a curved incision in the palm (June 24, 1927) (Plate No. 1). The smaller mass had herniated through the palmar fascia and was removed by section of its pedicle. The larger mass presented a very difficult dissection from the underlying structures. It was superficial to the flexor tendons and to the superficial arch. Two extensions of the tumor attached it closely and firmly to the thumb and first finger. At this time it was thought inadvisable to remove the tumor beyond the anterior transverse carpal ligament. Wound was closed with catgut. The wrist was put up in moderate hyperextension with the fingers flexed over a roller bandage.

Pain over the sectioned end of the median nerve



Figure 1.

Artist's Drawing of the Operative Field showing Location of Incision and Tumor Masses.

and anesthesia over the dorsal surface of the first and second fingers and the palmar surface of the thumb and adjacent first, second and one-half of the third fingers, and anesthesia from the base of the fingers to the incision were noted immediately post-operative. The pain became less marked and the splint was removed after six days. The fingers had fair motion and power, but they were lacking in co-ordination. No atrophic changes observed. Two weeks post-operative there was a distinct paresthesia in the first, second and third fingers. A distinct "shock-like" pain referred to the first and second fingers was present in movements of the wrist, or stretching of the palm, and especially on pressure over the carpus. Pain only very slight at the end of three weeks. A mass 1.5 c.m. in diameter had



Figure 4.

Photograph of Specimen Removed by Dr. Lehman.

developed in the volar aspect of the wrist about 5 c.m. above the upper limit of the incision.

Dr. J. E. Lehman removed this upper mass (Plate No. 4) and the remaining portion of the involved median nerve, which was enlarged to the "size of the index finger for about 4 c.m. up the arm." Operation about November 29, 1926. At the level of this resection only a portion of the circumference was involved. Healing was normal and complete freedom from pain resulted. There is full movement of the hand, though maladroit. Co-ordination is impossible.

Laboratory report of operative specimens:

Specimen consists of a tumor 6 c.m. x 3 c.m. x 2.5 c.m., completely encapsulated except at the sectioned ends (Plate No. 2). One cut surface is composed of 30 round, shining, fibrous structures varying in size from 1 m.m. to 3 m.m. The other cut surface is composed of 5 similar structures leaving the growth at varying angles. Mi-

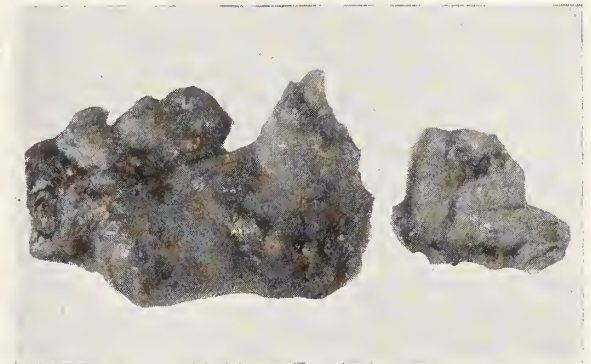


Figure 2.

Retouched Photograph of the Specimen.

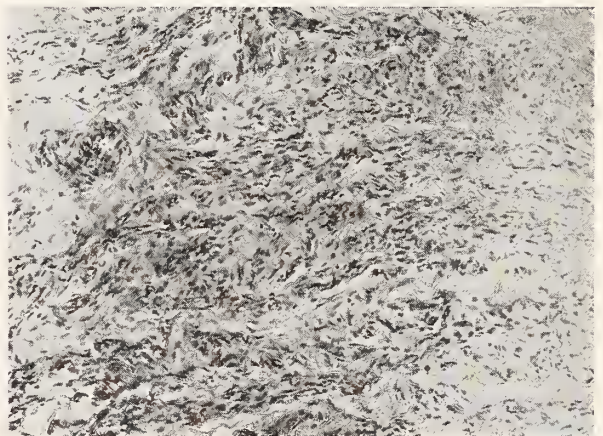


Figure 5.

Microphotograph of Specimen Removed by Dr. Lehman.
X 150.

croscopic examination shows a mass of loose vascular connective tissue in which lie about 30 or more greatly enlarged and thickened nerve trunks. The increase in size is due chiefly to an overgrowth of the connective tissue elements of the epineurium. There are many dilated blood vessels. The microscopic picture of the specimen removed by Dr. Lehman shows the same overgrowth of connective tissue (Plate No. 5).

DISCUSSION

Neurofibromata not associated with the general disease are uncommon, as are also tumors of the palm. Ott (1) reports nine

such cases at the Mayo Clinic. These tumors may arise from any of the connective tissue structures of the nerve trunks as pure fibromas, or they may arise from the more specialized nerve tissues as a pure neuroma. Generally it is found that the more rapid growing tumors of this type arise from the epineurium. In the present case the overgrowth was from the epineurium, with no atrophy of the specialized nerve substance. Neurofibromata are considered to be congenital in origin, due to some malformation of the ectoderm. This is especially true in the generalized neurofibromatosis. Solitary neurofibromata have a marked tendency to undergo sarcomatous degeneration, the microscopic picture being that of a round or spindle cell sarcoma, or a myxosarcoma (Fleming, L. N., and Marvin, E. W.) (2).

Ott (*loc cit*) gives the following findings as those of a solitary tumor of a nerve: (1) Presence of a tumor in the region of a nerve, (2) mobility of the tumor at right angles to the course of a nerve, (3) pain at the site and along the peripheral distribution of the nerve when the part is moved, or upon pressure on the tumor, (4) absence of, or slight motor or sensory disturbance, (5) history of long duration and slow progress. In the case reported no symptom was present which could not be easily accounted for by the presence of the growing mass upon the underlying structures. The pre-operative diagnosis was uncertain and not until sectioned at operation was the true nature of the tumor apparent. The choice of operation lies between enucleation of the tumor, leaving the nerve fibers intact, and excision of the nerve. Amputation of the extremity might be indicated if it was an extreme case of sarcomatous degeneration. In the plexiform type of tumor, and especially those near or involving the terminal branches of a nerve, enucleation is impossible. Enucleation of fibromas with preservation of the nerve fibers, when such tumors occur in the course of a nerve, is the operation of choice.

CONCLUSION

(1). Report of uncommon tumor of the palm.

(2). The choice of operation depends upon the complexity and the location of the tumor, as well as the histological structure.

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HEALTH TALKS

G. VAN AMBER BROWN, M.D., F.A.C.S.
DETROIT, MICHIGAN

The Wayne County Medical Society with a membership of over 1,400, is the fourth largest County Society in the world. It is composed only of physicians, graduates of approved medical colleges and licensed to practice medicine in the State of Michigan. As a society we are interested in the relief of human suffering by the prevention and cure of disease whether mental or physical.

One of the recent of many methods, being developed in the Wayne County Medical Society to combat disease, is a plan for instruction of the laity regarding measures they should be familiar with that are preventive of disease, in whole or in part.

This Society has adopted as a part of its campaign the idea of giving broadcast talks from this station, W G H P, Detroit. This is the first of a series to be given each Monday evening at 6:15 to 6:30.

During this introductory talk you will be told of some of the subjects that are to be dealt with during the weekly programs that are to follow, and of some of the other things that we, the Wayne County Medical Society are trying to do in behalf of the people of this great commonwealth, the State of Michigan.

It might not be amiss just here to advise those of you who have recently located in the village or city where you now live, also, those who contemplate taking up residence in some new locality, the proper way of selecting a physician. First, let us advise you not to go to some strange family next door for guidance. Their pet physician may not be at all the type desired. You know, society people often think a doctor is a great physician while physicians know him only to be a great society man. When in need of medical care, if you will call on the superintendent of a hospital or the officers of your medical society for the desired information, you are much more likely to be well advised. Physicians know better than laymen the qualifications of their fellow practitioners. After having first chosen your family physician, he should, and can, usually be relied upon to direct you when the services of a specialist are needed."

In the Wayne County Medical Society's organization there is a committee, the Bureau of Medical Guidance, who have someone that will aid in solving your medical

* First of a series of radio talks broadcast over W. G. H. P. under auspices of Wayne County Medical Society, November 21, 1927.

problems if you will telephone into the headquarters any day of the week from 12 to 1 o'clock; or better still, write or call at the Society quarters located on the 11th floor of the Maccabee Building, Detroit. Here many inquiries come pouring in every day and it is always a pleasure for this committee to unselfishly lend aid without charge for the service rendered, working always in a close and harmonious way with the physicians, boards of health, poor commissions and hospitals of Wayne County. Being a branch of the State Society, also of the American Medical Association, our Society functions according to the standards and ideals of these parent organizations. This leads me to state what characterizes the true physician as set forth in the May, 1927 issue of that splendid lay magazine, *Hygeia*.

The education of the true physician is attested by the degree of Doctor of Medicine from some worthy institution of learning. His moral, ethical and professional standing is attested by his membership in his county, state and national medical associations. His standing as a man (or woman) and as a citizen is attested by precisely the same standards applicable to others. His legal standing should be attested by his license to treat the sick. He considers the patient rather than the disease, and he utilizes all proven knowledge and any or all proved methods in the treatment of his patients. He recognizes that every patient and every human being, for that matter, needs advice calculated to avoid and prevent health dangers, to correct existing troubles and to prevent their repetition or progress. He knows that the infirmities of the body, mind and soul are inseparably linked together so as to require all that science, art and personality can bring to bear in the patient's behalf. He renders what he can of these services and he delegates the others wisely. He understands that no person can know or practice to the best advantage all phases of the great field of medicine and health; and therefore, whenever indicated and feasible, he asks other physicians for the assistance he needs. He either maintains or has contacts that insure adequate consultation, laboratory, X-ray, nursing, hospital and all other services necessary for the welfare of his patients. He follows the moral code of his profession, which insures confidential, sympathetic, consecrated service to his patients in such volume and at such times and in such places as are provided. He neither indulges in nor permits personal

puffery. When his name is seen in the public press, it is usually as the author of some dignified statement about the condition of some patient whose welfare is a matter of public concern. More rarely he may give an authorized interview or write an article for public information on some health subject. He relies for the growth of his own clientele on the influence of the ever-widening circle of those friends whom he has served.

He will admit that the best medical education is often inadequate and he will endorse the statement of Hippocrates that experience is fallacious and judgment difficult. But he feels that physicians are the only persons even remotely prepared by education and training for leadership in matters pertaining to improvement of health, the limitation of disease and the treatment of the sick. He thoroughly examines and carefully studies his patients, and he always makes written records of his findings. He is never boastful or inclined to discuss his patients with others. He never guesses; when in doubt, he says so, and invites consultation or assistance. He realizes his responsibilities and approaches his problems with the humility, seriousness and earnestness of purpose that ever characterizes the servant of God, of man and of science.

How does your doctor measure by this standard?

Beside the things we have been talking about, you may be interested to learn further of some of the activities of this great organization, The Wayne County Medical Society. For instance, it has within its ranks various committees, the duties, a very few of which we will here briefly review:

1. Public Education Committee who adopts measures for dissemination of information affecting the health and the general welfare of the public and under whose direction these lectures are being given.

2. The Committee on Health and Public Instruction whose duty is to carefully investigate and consider all matters of publicity of legislation having a sanitary, hygienic or other medical relation.

3. Legislative Committee whose duty it is to keep in touch with any impending legislation affecting the hospitals and the health of the public.

4. The Committee on Medical and Civic Relations whose duty is to investigate all matters of medico-civic interest and make such recommendations to the governing bodies as it deems advisable.

5. There is the Nurses Committee who makes careful inquiry into the condition of the nursing profession of the county and adopts such measures as may be deemed advisable to enhance services of nurses.

6. The Cardiac Committee to assist in any program for the prevention of heart disease, to foster the interest of cardiac research among the members of the Society and to keep the Society informed of any progress made in any phase in the treatment or diagnosis of heart disease.

7. The Cancer Committee is actively interested in the ultimate solution of the cancer problem.

8. The Maternal Welfare Committee whose duty it is to investigate matters of material welfare in Wayne County and to make such recommendations to the governing body of the Society as will assist in furthering the cause of better obstetrics.

These constitute only a few of the many problems with which this Medical Society is working. For instance, there is the scientific program with an evening meeting each week devoted to the study of disease, at which hundreds of physicians gather regularly to hear papers read and discussed by men known nationally and internationally. At noon two days a week there is a gathering of the younger physicians of the profession of Wayne County, who meet in our medical quarters and discuss ably indeed the problems of the art and science of the practice of medicine. It would do the heart of any man or woman good, whether physician or not, to hear these sincere young doctors, sixty or more of them at each one of these meetings, discussing with deep earnestness, the problems of medicine, seeking to improve themselves and others in their chosen life work, that they may relieve human woe.

In concluding, may I invite and urge you to tune in every Monday evening at 6:15 on W G H P, Detroit, and hear one of our members talk regarding these health measures, each having a direct bearing upon the welfare of every human being in this and every country, not only of present but of future generations. For the subject of health and disease is as broad as humanity itself.

NOTES ON THE NEURO-SURGICAL CLINICS OF GREAT BRITAIN, FRANCE AND HOLLAND

C. F. McCLINTIC, M. D.
DETROIT, MICHIGAN

Having spent considerable time in the study and observation of neuro-surgical

work in New York, Philadelphia and the Mayo Clinic, the writer decided to see if the clinics east of the Atlantic had any thing to offer the neuro-surgeon of the United States.

Due to the limited time and realizing that one should remain some time at each service in order to properly evaluate the work, the writer visited only the clinics in London, Edinburgh, Paris, Strasbourg and Amsterdam.

The first thing that impresses the American physician, especially on the continent is that a surgical specialist usually works in quite a wide field of surgery but from the field he selects some particular phase of the work, very much as we Americans take up a "hobby," and in this particular phase he invests his time and effort.

Mentioning just one or two phases of surgery in general; except for the American hospital in Paris and the Children's hospital in Edinburgh, the hospitals both as to buildings and equipment in no way compare with our modern hospitals as seen in every large American city. The equipment is also old and to us appear quite antiquated. Their plumbing is atrocious, and would never pass one of our building inspections. While a few surgeons have designed some rather ingenious instruments, yet there are very few if any that haven't their counterpart in the United States. Their technique in asepsis and antisepsis almost brings a chill to one trained in our methods.

To note a few of the particularly interesting phases of their work which is rather novel:

In London, at the National hospital an operation for the relief of intractable pain has been tried out which consists of splitting the spinal cord in the mid-sagittal plane. By this means all of the pain fibers from both sides of the body are severed, thus serving the purpose of a double ventral chordotomy as practiced by us.

In Edinburgh a very beautiful result has been obtained by perforating the septum between the lateral ventricles of the brain in unilateral hydrocephalus. However the differential diagnosis of the condition, and the basis for the operative technique was acquired in American clinics.

In Strasbourg, the place where periarteriorraphy and sympathectomies were first successfully practiced there exists a lot of enthusiasm for the procedures. The work is being done in the University of Strasbourg. In addition to an abundance of clinical material a very generous allow-

ance is made for laboratory workers so some very interesting scientific work is being done. The latest development consists in treating varicose and indolent ulcers by first doing a femoral periorrhophy and eight days later removing a ring of skin about the ulcer and then doing a skin graft. The results are very striking, and the treatment is worked out on a good scientific basis.

Probably the best organized neuro-surgical clinic in Europe is that at the University of Amsterdam presided over by the illustrious Professor B. Brouwer. He not only has a mass of clinical material at his disposal but also a wonderfully efficient and large corps of well trained assistants. He is especially interested in neuro-pathological work and in neuro-histology but this is beautifully correlated with his operative neuro-surgical clinics and his animal experimentation laboratories. One can see the cases on the wards and then enter a laboratory across a small court and study the tissues of cases in all points similar to those observed in the wards. His most interesting work is on the pathology of internal hydrocephalus. This appealed especially to the writer because it confirms our suggestion of laying open the cerebellum and aqueduct of Sylvius from the Thalamus to the Medulla for this condition.

While the distinguished de Martel does a great deal of neuro-surgical work in Paris yet we found nothing there different from our work in this country.

In Belfast the principal neuro-surgeon is more particularly interested in Urology, a branch in which he is internationally known.

In all the clinics with the exception of London, a very high regard is entertained for the American surgeon. The majority of the more progressive surgeons expressed the thought that they all desire to visit the United States to see our work. Even in London a great many of the leading physicians and surgeons are from the United States and Dominion of Canada or have studied in schools of the Western Hemisphere.

If we American physicians would thoroughly familiarize ourselves with the science of modern medicine as taught in the average medical school in our own country we would discover upon going abroad that about all we learn there can be found at home. The chief advantage of such a trip is that it gives us the assur-

ance that there is not anything worth while anywhere in the world in medical science that has not been appropriated by the wide awake American physician and surgeon. In seeing medicine and surgery as in sight-seeing, "See America First."

LORD LISTER'S INFLUENCE ON MODERN SURGERY*

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"And he stood between the dead and the living; and the plague was stayed."—Numbers: XVI. 48.

"It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way—in short, the period was so much like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only."

The late years of the eighteenth century thus described by Dickens, the years just preceding the American and French Revolutions, were not unlike those following Napoleon and Waterloo. There was little change. In spite of political revolutions in America and France, in spite of an intensified feeling of intellectual and moral liberty and in spite of the beginnings of the great industrial or social democratic movement, the nineteenth century in its early years showed little of promise. It was an age of enlightenment, it was an age of darkness, it was a period of science, it was a period of empiricism and theory. The hair-splitting theorists of the eighteenth century sitting in their gilded salons were still captivating the populus. The world laughed at Fulton's steamboat, Stephenson's locomotive was a delusion, Soemmering's electric telegraph was a toy, Darwin's expedition on the Beagle mere idling. Jenner's vaccination was an object of popular depreciation and Lavoisier, the chemist, was beheaded by the Commune. Though medicine was rapidly becoming a science and surgery was more than an art, as Semmelweis well said, "All was doubt and difficulty, only the great number of dead was an undoubted reality." In short,

* Awarded First Prize by Detroit Academy of Surgery.

* Read before the Detroit Academy of Surgery, November 10, 1927.

the period was one of struggle and strife between the forces of Empiricism and theory on the one hand and the scattered adherents of Science on the other. The time was ripe for a change, and the ensuing years were to witness the Renaissance of Science.

The year was 1827. Brilliant discoveries in the field of medicine were being made. The first great contribution to American medical science had been made two years previously when Beaumont in Northern Michigan observed in "fistulous old Alexis" the secrets of gastric physiology. Richard Bright in England was solving the riddle of nephritis, the Bells in Scotland were uncovering the mysteries of the nervous system, Addison had not yet made his discoveries. In the field of microscopic anatomy, Schleiden and Schwann were teaching the cellular basis of life, Liebig was revolutionizing chemistry and Laennec had succumbed the year before, himself a victim of the "white plague," whose pathology he has so accurately described.

Surgery at this period, while brilliant, was not progressing with the same rapid stride as was medicine. Since the days of Percival Pott and John Hunter in the previous century very few outstanding surgical discoveries had been made. There were many minor advances, but none comparable to the re-discovery of ligatures by Pare and the ligature of aneurisms by Hunter. After Hunter, surgery had ceased to be regarded as a mere technical mode of treatment and had begun to take its place as a branch of scientific medicine, firmly grounded in physiology and pathology. But advances were slow, discoveries few and improvements, if any, were largely of a technical nature. Outstanding figures like Sir Astley Cooper, the pioneer of vascular surgery, must be recognized, and Ephraim McDowell, who performed the first successful ovariectomy in the frontier town of Danville, Kentucky, in those pre-anesthetic times, must excite our admiration. Speed, skill and daring were the outstanding characteristics of the surgeons of this time.

"When I was a boy," writes Sir Clifford Allbutt, "surgeons operating on the quick were pitted against the other like runners on time. He was the best surgeon, both for the patient and the onlooker, who broke the three minute record in an amputation and a lithotomy." Cheselden performed a lithotomy in 54 seconds and spectators at Fergusson's Clinic were advised

"to look out sharp, for if you only wink you'll miss the operation altogether." Langenbeck once amputated a shoulder while a colleague present was taking a pinch of snuff. But in spite of such great dexterity, their field of usefulness was small. Their accomplishments were overshadowed by an overwhelming mortality which put to naught whatever knowledge and skill they possessed. The surgery performed was the surgery of necessity. Operations of mere expedience were looked at askance. Superstition had it that such operations were "tempting Providence" and would be followed by disaster. "The patient laid on an operating table," said Simpson, "was in more danger than the English soldier on the field of Waterloo."

"*Ars longa, vita brevis.*" The growth of human knowledge is by a slow and almost imperceptible process. Science progresses through periods of inactivity to periods of action, from times of barrenness to times of fruition. The occasional brilliant advance comes as a startling revelation and the ensuing period though enriched by the new acquisition may be one of veritable stagnation.

"Ages elapsed ere Homer's lamp appeared,
And ages ere the Mantuan swan was heard
To carry Nature lengths unknown before;
To give a Milton birth asked ages more."

What Cowper says of literature is not untrue in many respects of science and particularly of those applications of science upon which the welfare of humanity depends. Events which today go unnoticed may be regarded as epoch-making in future years when their practical value is justly appreciated. Fulton's steamboat was ridiculed. Though its first trans-Atlantic voyage was considered a great achievement, it remained for later generations to appreciate the boon which has been conferred upon humanity.

At this time there lived in the little English village of Upton a London wine merchant whose humble home was brightened on the 5th of April, in the year 1827, by the birth of a son, Joseph Lister, who was destined to dispel this chaos of sepsis by which even his own birth had been hazarded. Humble and obscure origins frequently mark the birth of men of genius; poverty rather than wealth provides the stimulus for the development of great character; comfortable and auspicious surroundings generally beget a *savoir faire*, rather than diligence and a knowledge of fundamentals. The life of Joseph Lister proves a remarkable exception to

this rule. He was born of Quaker parents whose quiet home life reflected little of their easy circumstances. They were well-grounded in learning and culture and with high, indeed rather austere ideals of morality, were particularly desirous of fostering these same standards in their children.

"In the field of observation," said Pasteur, "chance favors only those who are prepared." In Lister's life heredity, associations and early training were especially auspicious. His father was by avocation a well-known microscopist who, three years after the birth of his illustrious son, perfected the achromatic lens. For this achievement he was elected a Fellow of the Royal Society. Optics and microscopy were his hobby and very early he aroused the interest of his son in these pursuits. This is well shown in Lister's early writings, for soon after his graduation from the University of London in 1852, he published an essay on the use of the microscope in which he advocated what is now known as clinical microscopy. Just as Pasteur's microscope was called "an impracticable instrument fit for scientists only," so the contemporaries of Lister feared that the microscope would "sound the death knell of clinical observation."

"Opposition," said Pasteur, "is a useful stimulant," and so it proved with Lister. Nothing daunted by the deadly conservatism of his opponents, he continued and made a number of original histologic studies in which he verified Kollicker's observation that the iris consists of smooth muscle. The trend of his studies at this time was purely scientific. We hear nothing of surgical learnings and it was only at the behest of his two teachers, Sharpey and Graham, that Lister went to Edinburgh to study under the famous Scotch surgeon, Syme. His intention was merely to spend a few months at this clinic, but the interest aroused by this great teacher and the special aptitude of the pupil soon lengthened the period until in 1854 Lister was appointed house-surgeon at the infirmary. Three years later he was engaged in researches on inflammation, realizing that a proper understanding of this condition could only be obtained by a thorough understanding of morbid anatomy. He said at this time, "At the present day, more especially when theory is allowed such free scope, and is permitted to attack the most time-honored rules of practice, we stand in peculiar need of the beacon-light of correct pathology, to enable us to

steer a safe course amid the various conflicting opinions which assail us." It was at this time that he showed experimentally that injury to the vessel wall was the causative factor in blood coagulation. He observed the increase in the blood supply of the tissues subjected to irritants. He saw in the microscope the changing calibre of the arterioles and capillaries and the increased number of circulating erythrocytes but overlooked entirely the associated influx of leucocytes and the process to which Metchnikoff many years later gave the name "phagocytosis" (1884). A few years later he gave his paper on excision of the wrist for caries. For these achievements he was elected, at the early age of 33, a Fellow of the Royal Society. Technically his surgical results were excellent and yet in the series of six cases in which he had performed excision of the wrist, three developed hospital gangrene and one pyemia.

Lister at this time was travelling along the same lines as other members of the profession. In some respects, however, he already stood apart from the great majority as well as the leaders since his work had been largely physiological and because his constant aim was to found his treatment and explain phenomena upon a physiological basis. Every surgeon was discouraged by the prospect that, however perfect he might render his art, his results would always be doubtful and he might well say with Pirogoff, "But we shall soon see how often chance and how much that is still dark and obscure for us in surgical practice comes so prominently forward that all these qualities (such as skill, judgment, etc.) are completely paralyzed thereby." Many efforts were being made to dispel this uncertainty and many had attempted to remove the element of chance which impeded surgical advances. Up to 1865, however, no appreciable light had been thrown upon the subject and it is at this time that Lister's association with contemporary practices comes to an end.

Lister's first introduction to septic diseases came early in his career when, as dresser in the surgical wards at University College Hospital in London, he was dismayed to see his first patient develop phagedenic gangrene. Similar disasters were repeated only too often and in spite of painstaking care and a constant effort to prevent their occurrence no improvement was obtained. While pursuing his studies on inflammation and blood coagulation in 1865, Lister arrived definitely at

the conclusion that putrefaction of the blood and wound discharges were closely related to the development of septic disease, and that the only means of preventing sepsis was to combat putrefaction. Like others of his time, he could not account for the etiology of putrefaction. Some thought it was due to the gases in the air, especially the oxygen, which acted upon the organic fluids of the wound; others presupposed the existence of indefinable substances called miasms which supposedly emanated from unhealthy regions and were carried by the air to the open wound. Such theories were eminently unsatisfactory. John Hunter had shown in the previous century that oxygen itself did not cause sepsis since injuries to the thorax produced by fractured ribs which punctured the pleura and allowed air to enter the chest never developed sepsis. No other explanation was offered and consequently the theory of miasms persisted.

In the light of present day practice it is difficult to realize the horrible conditions which existed at the time when Lister was beginning his surgical career slightly more than sixty years ago. "A pin prick is a door open to Death," said the French surgeon Velpeau. That door widened before the smallest wound, accidental or operative. Surgeons hesitated before the slightest operation; even the lancing of an abscess or a whitlow was often followed by serious consequences. Suppuration was almost invariable and strangely enough occurred more frequently in hospitals than in private practice. It was even much worse in cases demanding surgical intervention. Thus the operation of ovariectomy first performed by Ephraim McDowell was discouraged and often prohibited, and, because of the great mortality due to sepsis, some went so far as to consider the operation "classed among the attributes of the executioner." Thus an eminently useful operation was almost discarded because of circumstances over which the most adroit technician had no control.

Following these suppurating wounds there appeared waves of rapidly spreading sepsis in the form of erysipelas, "hospital gangrene," pyemia, and septicemia ending frequently in death. Compound fractures were particularly fatal. Operations upon the abdominal and pelvic viscera were too often fatal and the surgical procedures most often carried out were amputation and ligations of blood vessels.

The surgical field, though remarkably widened in 1846 by the advent of anesthesia, was still narrowed by the prohibitive mortality which prevented even the boldest from straying from the well-trodden path. The theory of miasms stood in the way of progress for such a relationship between patient and disease could not easily be remedied. Since the beginning of the nineteenth century surgery had not advanced—it had positively retrograded. Mortality after operations in preceding centuries was less because, albeit unknowingly, antisepsis had been practiced through cauterization by fire, boiling oil and disinfecting substances. The Good Samaritan who poured "oil and wine" upon the wounded traveller was practicing the same surgery as was recommended in 1749 in a popular handbook entitled "Medicine and Surgery for the Poor." "It is very salutary, when uncovering the wound in order to dress it, to begin by applying over its whole surface a piece of cloth dipped in hot wine or brandy." The nineteenth century had no improvements to offer,—here and there exceptional men showed signs of divine discontent with the attitude of resignation, but by 1860 no essential progress had been made.

Many famous surgeons of the time were giving the problem of sepsis much thought. Chief among them was Simpson, who first introduced the use of chloroform and acupuncture. He collected statistics in a series of more than 2,000 cases of amputation performed in hospitals as well as 2,000 performed in country practice. Their analysis showed that not only was the mortality greater in hospital practice "than in private practice, but that it increased exactly in proportion to the size of the hospital." To the question, "Why is hospitalism so dangerous to the sick?" he gives the following answer:

"There exists, I think, evidence on this question tending to show that the constitution of the surgical patient in the surgical wards is liable to be endangered sometimes by the influence of morbid contagious materials from the bodies of other inmates, though the blood poisoning which leads on to pyaemia is generally produced by inhalation of organic and other materials which usually exist in the air of hospital wards, but which are not contagious."

Mortality statistics in those days, as compared to present day averages were appalling. To quote Erichsen, "In the Edinburgh Infirmary mortality after amputa-

tion was 43 per cent, at Glasgow, 39 per cent, Paris, 58.8 per cent, Pennsylvania Hospital, 24.3 per cent, Massachusetts General Hospital, 26 per cent, military practice, 75 to 90 per cent. The total average mortality in metropolitan hospitals in England was 38.3 per cent, of which 6 per cent was from pyaemia alone."

At this period, Lister's mortality rate after amputation was 45 per cent.

The consensus of opinion being that septic diseases were due to "hospitalism" the prophylaxis employed was reasonable enough. Old buildings were destroyed, new ones took their places, but still the plague persisted. To quote again from Erichsen:

"But surely no stronger or more conclusive evidence is needed of the tenacious and ineradicable nature of this pyaemic infection when once it has taken hold of a hospital—what name so appropriate as "hospitalism" for a condition of things such as is here described. The town is free from infection; the hospital saturated by it, to such an extent as to induce its own surgeons to recommend their patients not to enter it, to compel them to refrain from operating, and, after every attempt that science and humanity can suggest, every hygienic means employed in vain in the fruitless attempt to eradicate the pestilence 'from the very fabric itself' to cause the governors, as a last resource, to decide on the demolition of the building and its complete reconstruction, at a great expense as an only remedy. The truth is that when once a hospital has become incurably pyemia-stricken, it is as impossible to disinfect it by any known hygienic means, as it would be to 'disinfect' a crumbling wall of the ants that have taken possession of it, or an old cheese of the maggots which have generated in it."

Such conditions made surgery a sad calling for the beginner. It was almost an even chance whether patients would recover or die; and, if they recovered, if their convalescence would be uneventful, or retarded by suppuration. Elective operations, however, were done for all that, and, when the surgeon had closed the wound, "He was," as Volkman said, "like a husbandman, who having sown his field, waits with resignation for what the harvest may bring, and reaps it, fully conscious of his own impotence against the elemental powers, which may pour down rain, hurricane and hailstone."

Before the new era which Lister in-

augurated in 1865, other men had also seen the light, but their voices were unheeded and their victories unsung. In science as well as in other human endeavors, no great man stands alone. Great as he may be he is yet a social product and his achievements reflect the labors of the immortal dead. The genius of Bach is heard in Beethoven and the discovery of Newton reflects the wisdom of Kepler and Galileo. Genius does not arise by spontaneous generation. As early as 1843 Oliver Wendell Holmes had recognized the contagiousness of puerperal fever and had devised efficient prophylaxis. Five years later in Vienna Semmelweis had made the same observation, instituted the same treatment and proved his theory by his results. Holmes was violently opposed, his contribution unrecognized. His was truly the "voice of one crying in the wilderness." Semmelweis was rewarded by a similar though more cruel fate. Brooding over the cruel persecution to which his contemporaries subjected him, he became insane and died a martyr to the cause of antisepsis. A happier fate rewarded the efforts of the last and greatest of Lister's fore-runners. The discovery which made Lister's contribution possible came from the sister-science, biology which had been advancing with rapid strides.

It is necessary to digress at this point to trace the development of a discovery made by a French chemist. This young scientist was Louis Pasteur, the greatest benefactor of mankind in recorded time. He turned from his accustomed paths toward the unknown land, much against the advice and warnings of his distinguished teachers, Dumas and Biot, who feared that the promising youth might lose his way. Pasteur's first independent discovery was made shortly after his graduation from the Ecole Normale in 1847. In this he founded the science of stereo-chemistry by his brilliant researches on molecular dissymetry in tartaric and racemic acid. It was this discovery which made possible the development of many useful drugs, chief among which is salvarsan, first synthesized by Ehrlich.

It was a great step from the field of chemistry to the studies on fermentation which next claimed his attention. This process has always aroused his curiosity; he had often observed it in his studies in racemic acid and had always remembered the prophetic words of Robert Boyle, the celebrated English physicist, who, two centuries before, had made the prediction that

"whoever could probe to the bottom the nature of ferments and fermentation would probably be more capable than anyone of explaining certain morbid phenomena." In 1857 he showed that the process of fermentation was inseparable from the activities of minute microscopic organisms to which he later gave the term "microbe." The origin of these germs at this time became the object of many violent controversies, Leibig and his adherents claiming spontaneous generation *de novo* of living from non-living materials, Pasteur claiming that this theory was incompatible with the facts he had observed. Fermentation did not and could not take place in even the most favorable media if the microbes present in the circulating air were excluded. He demonstrated in 1863 that "diseases" of wine were due to unfavorable fermentations and that they could be prevented by destroying the causative organisms.

Thus we may observe the evolution of a discovery conceived in the field of chemistry which was later to prove the key to the solution of the surgeon's dilemma. Thus the man who had never handled a scalpel, who shuddered before any surgical operation, who could not even witness suffering in an animal, became the leader of the medical profession and "led them into the kingdom which they longed for but could not obtain for themselves." We see in Pasteur the perfect type and figure of that intellectual passion which makes for scientific progress. It remained for a chance circumstance to prove the practical value of Pasteur's work in surgical practice. The story of how Lister supplemented and applied Pasteur's discoveries is the most fascinating chapter in the history of medicine.

The subject of putrefaction was ever uppermost in Lister's mind and the frequent confidante of his many worries and perplexities on this subject was Thomas Anderson, professor of chemistry at Glasgow University, where, since 1860, Lister had occupied the chair of surgery. While the two were walking home one evening in 1865, Anderson spoke of certain publications by Pasteur relating to the causes of fermentation and the controversial question of spontaneous generation. Lister, who had hitherto been unfamiliar with continental literature, at once procured these papers, and, after reading the famous "Memoire sur la fermentation appelee lactique," became convinced that a solution for his problems was at hand.

But Lister's was an inquiring mind. Be-

fore he could proceed he must himself test the truth of Pasteur's statements and verify his experiments. "Genius," says Carlyle, "means the endless capacity for taking pains," and in Lister this capacity was endless. He not only repeated many of Pasteur's experiments, but also devised others of his own to fit the problem with which he labored. In him Pasteur's favorite aphorism "Chance favors the prepared mind" finds its most dramatic application. The years spent in patient, thorough experimentation gave him the necessary preparation to perceive the real value of Pasteur's work, and very soon he was able to formulate his application of Pasteur's principles. Quite by accident he read of the use of carbolic acid and "its remarkable effects upon the sewage of the town of Carlisle; the admixture of a very small proportion not only prevented all odor from the land irrigated with refuse material, but, as it was stated, destroyed the entozoa which usually infest the cattle fed upon such pasture." This fortunate observation removed the last obstacle and from then on his problem was to perfect his technic. Many antiseptics were tried but none gave as good results as carbolic acid.

Lister's struggle was a romantic one. We may think of him with his courtly manner and indomitable courage, as one of Arthur's Knights sallying out single-handed to hunt out and destroy a mighty foe. Inspired only by a theory he vanquished his enemy with a bottle of crude carbolic acid. His enemy was invisible but his ravages could be seen on every hand; his mode of attack, his place of abode, his habits of living were obscure. All Lister knew was that he foe was probably a minute unicellular body belonging to the vegetable kingdom. Few were better prepared than he to carry on the fight, few would have had the necessary courage to struggle against the ridicule and prejudice of his contemporaries. But Lister was convinced of the truth of his principle and its enormous benefit to mankind.

The momentous events which took place at Lister's Clinic at Glasgow during the spring and summer months of 1865 were far from theatrical in the effect which they produced. The studies were carried on under tremendous difficulties for Lister selected only the most unfavorable cases on which to try his treatment. Surgeons even today view with great concern any compound fracture. Infection is the frequent complication and the damage done by in-

vading organisms has often brought about disaster before the surgeon is consulted. Such was the case with the first patient on whom Lister applied his treatment. Death resulted, for the patient was septic, almost moribund, when Lister sought to effect a cure.

Such a result might have caused many less inspired investigators to give up in despair. Lister, however, was confident that given a suitable case, his treatment would bring results. He waited patiently for such cases to arrive. We read graphic accounts of the patients as they were admitted to the infirmary. Factory workers with mangled hands, children crushed by heavy vehicles and trampled by horses, men and women with compound fractures of every type and description soon completed a long series of instances in which the antiseptic principle was tried. Even in favorable cases the results were often far from brilliant. The carbolic acid first used in its crude state often caused as much destruction of tissue as the injury itself. Gradually, however, through a process of trial and error a technic was developed which brought results. Using only dilute solutions of carbolic acid and observing the rigid precautions against bacterial invasion Lister wrought the miracle of modern surgery. Mangled limbs healed by the Hippocratic ideal of first intention and the hectic flush of the septic patient, hitherto a common sight in surgical wards, became a rarity. It was only after he had collected a convincing series of successful cases that Lister determined to publish his results. His mortality rate by the new method was only one-third of his previous record. Morbidity and resulting deformity were reduced to a minimum. We may imagine Lister's joy in contemplating his results, for surely death had been "swallowed up in victory."

The visitors at Lister's Clinic were greeted by a striking innovation. The odor of carbolic acid which permeated the atmosphere presented a sharp contrast to the "good old surgical smell" of former days. Clean gowns replaced soiled frock-coats; care and deliberation supplanted the speed and dexterity of the old regime. Those who hoped to witness operations performed with the show and finesse of the prestidigitator were doomed to disappointment. They saw instead, a scholarly figure engrossed in his struggle against infection proceeding with the careful exactitude of the anatomist. The old glamour had gone; the spectacular surgery of the

old masters was replaced by a complicated, dilatory routine. The field of operation, scrupulously cleansed with soap and water was covered by a spray of carbolic acid issuing from the "donkey engine" pumped by an assistant. Carbolic acid everywhere! On the instruments, on the dressings, on the ligatures, on the patient himself. None but carbolized objects touched the wound. The aim was constantly to prevent the access of living bacteria, and to destroy by the antiseptic properties of the acid those organisms floating in the air and harbored in the wound. The technic was anything but a pleasant one. Fingers and hands became white and numbed by the acid, and many less inspired and less conscientious surgeons rebelled against the practice. But the Chief, ever mindful of the horrors of sepsis, ever hopeful of his ability to prevent them continued steadfastly in his painstaking routine.

"Fort mit dem Spray," was the edict of one of Lister's German contemporaries who denied the antiseptic principle. The spray *was* eventually relegated into disuse by Lister himself, but only after he became convinced that air-borne bacteria were negligible and that the real source of infection was the surgeon himself. Time has dispensed to a large extent even with the antiseptic method and has substituted the aseptic mode of treatment. Asepsis as now practiced differs only in principle from Lister's method. The modern surgeon applying Lister's discovery that infection results from bacteria introduced at the time of operation uses only materials which have been rendered bacteria-free. Instruments, dressings, ligatures, even the gowns and gloves which the surgeon wears are sterilized by heat. Listerism hoped to destroy infection, aseptic surgery aims to prevent it. Lister's principles, however, remain. The fact that organisms present in the air, on the instruments, dressings, and the very hands of the surgeon himself, are responsible for suppurating wounds is forever established.

Like Holmes, Semmelweis and Pasteur before him, Lister met with fierce opposition. None understood his principle and those who blindly followed his technic were seldom able to duplicate his results. "The common curse of mankind," says Shakespeare, is, "ignorance and folly." The ignorance of Lister's opponents can justly be pitied but their folly in adhering to old and established practices, their "ancestor-worship" of former teachings can hardly be condoned. Great surgeon though he

was, Simpson was the leader of the opposition to the "carbolic treatment." He denied the bacterial origin of infections and spoke of microbes as "mythical fungi," while others compared them to the belief in the aerial sylphs of the Rosicrucian philosophers. The painstaking care required in the antiseptic technic did not appeal to those whose training in pre-anesthetic times placed the greater emphasis upon speed.

Heedless of the abuse heaped upon him and encouraged only by his firm conviction in the truth of his principle as evidenced by the great success which continued to follow his treatment, Lister continued his studies. While a staunch defender of his views and ever ready to demonstrate his treatment, Lister did not enter freely into verbal polemics. The "*odium medicum*" was foreign to his nature.

New successes continued as he applied his treatment to "clean" surgical cases. Hitherto unheard of operations were performed with remarkable results. Joints were opened without fear of sepsis and viscera never before subjected to operations were exposed without fear. In 1880 after returning to his Alma Mater in London after almost forty years of absence, Lister introduced the innovation of absorbable ligatures in the form of chromicized catgut. Ligatures hitherto employed were non-absorbable and their long ends were left hanging from the wound. The introduction of absorbable sutures allowed the surgeon to cut the ends short and did away at one stroke with the clumsy practice which had been followed.

The struggle for acceptance was long and bitter. Many of his old opponents died and the young men, many of whom had been trained in Lister's Clinic, replaced them and became the chief exponents of Listerism. The "die-hards," however, continued their attacks. Now that the germ theory was more commonly believed they attacked him on the basis of priority in the use of carbolic. The French surgeon Lemaire, had actually employed carbolic acid for many years before Lister, but Lemaire had no conception of the bacterial basis of infection and his use of the acid was quite empirical and quite different even in technic from that advocated by Lister.

Long before his English brethren had recognized his worth, continental surgeons, chiefly those in Germany and France had adopted his methods and made many improvements. The prophet had no honor in

his own country, but eventually his followers increased as many "who came to scoff remained to pray." The great homage accorded Lister in his later years and up to his death in 1912 is well known. He had the great satisfaction of seeing the adoption of his principle throughout the world and of receiving the gratitude of mankind.

"Simplicity of character," said Morley, "is no hindrance to subtlety of intellect," and in Lister we see a man whose quiet Quaker sobriety and demure personality little bespeak the depth of mind or the profundity of thought which was his. His were not the traits that command ready attention and make for rapid and brilliant progress. His ideals were severe, almost austere, and yet his nature showed those elements of gentleness which come only out of strength. "A warm, loving heart, and, Truth in an earnest spirit" were the ideals which he set for the medical profession. The life and work of Lister are a constant demonstration of these ideals. No praise of him is more appropriate than that given at the memorial discourse at his death.

"Of Joseph Lister's winsome personality, those speak most warmly who knew him best. It was his gentleness, above all, that made him greater. His very presence was a spiritual force. Clear-eyed and pure of soul, he cherished from earliest days that love of truth that guided him to the end. His noble passion for humanity extinguished all thoughts of self and personal fame, impelling him along the path which he steadfastly pursued till he found the secret of his search, and bestowed upon the world probably the greatest boon which science has been able to win for the physical life of mankind. Yet greater than his greatest achievement was the man himself, and the final secret of his greatness was that serene simplicity which was his most distinguished characteristic—His was the grave and thoughtful courtesy which bespoke the Christian gentleman and the earnest lover of his kind. Hence we are not surprised to learn how he stirred enthusiasm and moved men to reverence, how he gained such love and affection as rarely fall to a scientific teacher. Behind his acknowledged mastery of his science, his grave and noble face, marked by soft lines of tranquil thought, revealed a soul of singular beauty and sweetness, of high integrity, and stainless honor. That such a man, dowered with God's gift of genius,

should rise to lofty heights and achieve great things was inevitable."

"There is no greater charm for the investigator," said Pasteur, "than to make new discoveries; but his pleasure is heightened when he sees that they have a direct application to practical life." As an operator, Lister was far from brilliant, far from the foremost of his profession, but, as a founder of principles, as a benefactor of mankind, Lister is the world's greatest surgeon.

He "created anew," said Treves, "the current art of healing; he made a reality of the hope which had for all time sustained the surgeon's endeavors; he removed the impenetrable cloud which had stood for centuries between great principles and successful practice, and he rendered possible a treatment which had hitherto been but the vision of a dreamer. The nature of his discovery like that of most great movements was splendid in its simplicity and magnificent in its littleness. To the surgeon's craft it was 'the one thing needful.' With it came the promise of a wondrous future, without it was the hopelessness of an impotent past."

Modern surgery owes its very existence to Lister's achievement. Lucas-Championniere once said that there were only two periods of surgery—that before Lister and that since Lister. Fifty years ago the idea of a wound was inseparable from that of fever; today the comparative safety with which the surgeon practices his art is a marked contrast. To justly appreciate Lister's contribution to modern surgery, one needs only to view the hopeless conditions of the past.

A new era in medicine and surgery has arisen. The advent of the antiseptic principle and its resulting revolution of surgery overthrew the barriers of the past and opened fields which could scarcely have been imagined in a former day. Before Lister, one out of every three or four patients died after major operations; the mortality rate is now from two to three percent and this mortality is now, according to Sir Berkeley Moynihan, almost entirely a mortality of delay. Before Lister, surgery was largely confined to the extremities; it now exercises its beneficent sway over every region of the body. "Even the heart," says Deaver, "is no exception, and the abdomen and pelvis, formerly considered as sacred precincts, have almost become the 'playground of the surgeon'." Many hitherto unknown lesions can now be exposed, ills and ailments formerly classed

under the great sub-title "Idiopathic" are now thoroughly understood and successfully treated. The much abused but ever dangerous appendix is but one of the striking examples which might be mentioned.

The surgery of the past was the surgery of necessity. To this we may now properly add, the surgery of election. Before Lister, the only justifiable operation was one instituted as a life-saving procedure. Today we may safely subject patients to operations which not only save life, but which prolong life and promote welfare and happiness. The relief of the lame, the halt and the blind is of greater interest to the modern surgeon than the treatment of the moribund. To increase the efficiency of the worker, to maintain and augment the usefulness of the citizen are the demands which modern society now place upon surgery. The growth of industrialism has given rise to new surgical fields, "industrial surgery," "prophylactic surgery," "railroad surgery," "surgery of the reconstruction and rehabilitation of the disabled from accident and injuries" and other varieties of surgical service have come into prominence.

Fortified by asepsis, surgery has again become an art, but with a new interpretation. The development of plastic surgery, surgery upon the ductless glands and the many other advances has placed surgery in the class of the humanistic sciences. The modern surgeon has passed beyond mere duties to the individual, to the duties which he owes to his community and humanity in general.

Thus the greatly widened surgical approach increased largely the responsibilities and the usefulness of the modern surgeon. Surgery is more than what it originally meant—"chiurgy," i.e. handicraft. Besides the new element of safety, modern surgery because of Lister, can not boast of achievement.

To the man who made such unselfish efforts in our behalf, who toiled that we might gain, who achieved where others failed, surgery and humanity can never be duly grateful. His position is one of supreme greatness, his nature one of rare nobility.

To Lister we may justly apply the words written by Matthew Arnold of his father. For his was one of those

*"Souls tempered with fire,
Fervent, heroic and good,
Helpers and friends of mankind."*

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

The State Advisory Council of Health has adopted and authorized the publication of a Health Officer's Manual. To make the contents immediately available to physicians, chapters will be published each month in these columns.

THE HEALTH OFFICER'S MANUAL

Effective January 1, 1928

Section I

GENERAL CONSIDERATION AUTHORITY AND PENALTY

1. Act 146 P. A. 1919 provides for the appointment of a State Health Commissioner by the Governor.

The State Health Commissioner shall exercise all of the powers and be responsible for the performance of all the duties imposed by law upon the Michigan Department of Health.

2. The State Advisory Council of Health is appointed by the Governor as an advisory body.

3. The State Health Commissioner with the concurrence of the State Advisory Council of Health shall make rules and regulations to carry out the purpose of the public health laws.

4. It is the duty of all local health officers to carry out all rules and regulations of the State Health Commissioner and all special orders issued. Failure to do so constitutes misfeasance of office.

5. Any person violating any rule and regulation or any lawful order of the State Health Commissioner, shall be deemed guilty of misdemeanor and upon conviction thereof, shall be fined not more than \$20, or imprisoned for not more than six months, or both.

Section II

SCOPE

1. *Necessity.* It is hereby declared by the State Department of Health to be necessary and proper for the preservation of the public health to make the following rules and regulations concerning relationship with places of infection and for the apprehension and treatment of persons who may be affected with or who shall have been exposed to any infectious, contagious or communicable disease.

2. *Minimum Requirements.* It is hereby declared by the State Department of Health that these rules and regulations are to be the *minimum requirements* for the safeguarding of the public health within the state.

3. *Power to Make Additional Rules.* Local Boards of Health are hereby authorized and empowered to make such additional rules and regulations for the care and control of communicable diseases as may be necessary, provided they are not in conflict with these basic rules and regulations and are not contrary to the best public health practice.

4. *Investigation of Suspected Cases.* Whenever a local Board of Health receives a report of a case of a communicable disease from a person who is not a physician or receives a report from a physician that a certain case is suspected of being a contagious disease, the said Local Board of Health shall cause an investigation to be made to determine the true nature of the disease. This investigation may be made by a physician or by a medical representative of the State Department of Health.

5. *Reports to the State Department of Health.* Local health officers are required to forward all reports of the occurrence of communicable disease to the State Department of Health, immediately. This has been interpreted by the courts to be within the following twenty-four hours.

6. *Removal.* Whenever a local Board of Health allows the removal of a case of communicable disease while in an infectious stage, from their jurisdiction, this fact must be reported to the State Department of Health.

7. *Repeal of Previous Rules and Regulations.* All rules and regulations of the State Department of Health promulgated prior to this date which are in conflict in whole or in part with any of these rules and regulations are hereby repealed insofar as they conflict with these rules and regulations.

8. *Provision for New Rules and Regulations.* All rules and regulations issued by the State Department of Health at a date subsequent to the date of these rules and regulations shall amend or modify these

rules and regulations on every point of conflict.

9. For the purpose of these rules and regulations the following diseases are declared to be reportable:

Actinomycosis	Measles
Acute Infectious Conjunctivitis (ophthalmia neonatorum)	Mumps
Ankylostomiasis	Paratyphoid fever
Anthrax	Plague
Cerebrospinal fever (meningococcus meningitis)	Pneumonia
Chancroid	(lobar and broncho)
Chickenpox	Polio-myelitis (acute anterior)
Cholera (Asiatic)	Rabies
Dengue fever	Rocky Mountain fever
Diphtheria and membranous croup	Scarlet fever (scarlatina)
Dysentery	Septic sore throat
(amoebic or bacillary)	Smallpox
Encephalitis Lethargica	Syphilis
(Sleeping Sickness)	Tetanus
Erysipelas	Trachoma
German Measles	(granular conjunctivitis)
Glanders	Trichinosis
Gonorrhea	Tuberculosis (all forms)
Influenza (Epidemic only)	Tularemia
Leprosy	Typhoid fever
Malaria	Typhus fever
Malta fever (See Undulant fever)	Undulant fever (Malta fever)
	Vincent's Angina
	Whooping cough
	Yellow fever

The following contagious and preventable diseases should be supervised and controlled and may be excluded from school but need not be reported:

Impetigo	Pinkeye
Favus	Pediculosis (Lice)
Tinea tonsurans (Ringworm)	Other contagious skin conditions
Scabies (Itch)	

Section III REPORTING

(a) *Definition.* For the purpose of these rules and regulations a case of any of the diseases mentioned in Section 2 may be said to be *reported* when the name of the person, address, age, color, sex, together with the name of the disease existing or suspected is given in *writing* to the Local Health Officer (or State Department of Health, if a venereal disease) immediately after seeing such a case. Court decision interprets the word "immediately" to mean "within the following twenty-four hours." The report shall be properly dated and signed, giving the address of the physician or other person so reporting.

(b) *New cases in Home.* Every new case of a reportable communicable disease developing in a family where one already exists *must be reported*. All these reports must be forwarded by local health officers to the State Department of Health immediately.

(c) *Special Reports.* For reporting *Chancroid*, *Gonorrhea*, or *Syphilis*, special blanks are obtainable from the State Department of Health which must be filled in and submitted as the official report of the case.

(d) *Who Must Report.* Cases must be reported as described above by the following persons provided that no person shall be prosecuted for not reporting a case that has already been reported:

1. Physicians and dentists must report all cases known or suspected by them of having any of the diseases mentioned in Section 2 of these rules and regulations.

2. All persons other than physicians, must report as described above all suspected cases and all places where they have reason to believe there is a case of communicable disease. Among others this includes:

(a) Parents and guardians.

(b) Superintendents, principals, and teachers of all public and private schools.

(c) Nurses, whether engaged in private duty, school, public health, or industrial work.

(d) Keepers of hotels and lodging houses.

(e) Superintendents of public or private hospitals, clinics, dispensaries, asylums or jails.

(f) Owner or manager of any dairy farm or other place where dairy products are handled or offered for sale, must report all possible cases among their employes or the families of these employes.

(g) Licensed embalmers must report all cases where they are called upon to embalm a body when the death certificate certifies that the primary or contributory cause of death was one of the diseases mentioned in Section 2.

It is the intent and expectation of these rules and regulations that every case of communicable disease will come to the attention of someone who will be legally responsible for the reporting of the case.

By requiring suspected cases to be reported the same as known cases, the possibility of mild, missed or abortive cases not receiving attention is minimized.

Summary. What is to be reported? All cases and suspected cases of the diseases listed in Section II.

When? "Immediately" has been defined by the courts to mean "within the ensuing 24 hours."

How? Reports can only be made officially in writing.

Where? To the local health officer. Venereal diseases must be reported directly to the State Health Department.

Who? Any physician who sees the case or the layman who has reason to believe

of the existence of a case or a suspected case.

PLACARDS

(a) *Definition.* For the purpose of these rules and regulations the word "placard" shall mean that a card at least seven by eleven inches in size, bearing in large letters the word "quarantine" or "warning" shall be conspicuously placed on or near all doors leading to and from the quarantined area.

(b) *Quarantine Placard.* A quarantine placard shall be a yellow card which shall read essentially as follows:

QUARANTINE

No one shall enter or leave these premises, except as provided by the rules and regulations of the Michigan Department of Health.

Violation of this rule is punishable by law.

This card is to be used in cases of Diphtheria, Scarlet Fever, Smallpox, Poliomyelitis and Meningitis.

It is a misdemeanor punishable by law to remove this placard without authority of the local Health Officer.

Local Health Officer.

(c) *Warning Card.*

A warning card shall be a red card which shall read essentially as follows:

WARNING

This card establishes an Isolation as defined by the Michigan Department of Health.

This card is used on the home of cases of Measles, Whooping Cough, Chickenpox, Mumps and German Measles and Diphtheria Carriers and persons exposed to a quarantinable disease.

It is a misdemeanor punishable by law (1) to allow any child susceptible to this disease living in this house to return to school while this placard is posted, or (2) to remove this placard without authority of the Local Health Officer.

Local Health Officer.

Purpose. The local board of health has the responsibility of informing the public where any menace to health exists. This responsibility is met by the use of placards announcing such facts to the public.

Responsibility. The responsibility of putting up and taking down placards rests upon the local board of health. Any improper use or unauthorized removal of a placard is punishable by law.

Kinds. One kind of a card is used to

announce a quarantine and another to show where a case of measles, whooping cough, mumps, chickenpox or German measles resides, a diphtheria carrier or a person exposed to a quarantinable disease.

THE NEW "TAXICAB DRIVERS LAW"

The physical examination of all persons driving autos carrying passengers for hire is required by Act 309 of the Public Acts of 1927. The pressure for legislation of this kind came to the legislature because of such regrettable occurrences as accidents at railroad crossings with busses loaded with children on their way to school.

It has happened in the past that certain auto accidents have been the direct result of early tabes. It was for this reason that the clinical and laboratory examinations for syphilis were required by the act. The act reads, "No certificate shall be issued to any applicant whose vision shall be less than 50 per cent of normal in each eye, whose hearing shall be less than seventy-five per cent normal and unless such applicant shall be free from clinical and laboratory signs or tests of syphilis or any other disease of the nervous system and shall be free from any communicable disease dangerous to the public health."

For the purpose of carrying out the provisions of this act the State Health Commissioner is required to designate any necessary number of registered and qualified physicians for the purpose of examining the applicants. *The State Health Commissioner has appointed the entire enrollment of each County Medical Society of the state.* This makes each member of each County Medical Society a direct representative of the Michigan Department of Health for the purposes of carrying out this act.

The blanks and mailing cases for the laboratory containers can be had by addressing the department, and this work will be expedited by suitable additions to the department staff. After the containers and the blanks for the physical examinations have been received by the physician, the physical examination should be made and blood drawn for serological tests. The blood should be sent to the laboratory in the usual way and the physical examination blank held at the physician's office until the report of the blood specimen is received. Then the laboratory blank can be attached to the physical examination blank and the whole forwarded to the Michigan Department of Health.

The fee for the physical examination is to be paid by the chauffeur who is examined.

—Don M. Griswold, M. D., D. P. H.
Deputy Commissioner.

ORGANIZATION OF STUDY CLUBS

A recent addition to the activities of the Bureau of Child Hygiene and Public Health Nursing of the Michigan Department of Health consists in the organization of study clubs on prenatal, infant and preschool care. Forty clubs have already been organized in Gogebic, Menominee and Lapeer counties, and it is hoped that other counties will be added. In Gogebic and Menominee counties, Parent-Teacher associations have undertaken the study, but in Lapeer county the groups consist of interested women regardless of organization.

The Michigan Mothers' Manual is given to each club member to use as a text book, and outlines and additional literature are furnished to the leaders. The study is divided into six lessons, and there is a leader for each lesson. Local physicians in several places have agreed to discuss the lessons on prenatal and infant care, and in one instance the physician has agreed to take charge of all six lessons. Reports already received of the attendance at these classes show a very gratifying response, and some group leaders have sent for more literature for new members.—L. R. S.

POLIOMYELITIS

Beginning November 16, the number of cases of poliomyelitis occurring throughout the state began to decrease very markedly. This is as was predicted, as the number of cases falls rapidly, ordinarily, with the onset of cold weather. The largest number of cases this year occurred in September when 98 were reported. October followed with 91 and in November 34 cases were reported. During the first ten days of December there have been eight more cases.—P. F. O.

REGISTRATION NUMBERS OF MICHIGAN LABORATORIES HANDLING PATHOGENIC ORGANISMS

(Additions to December 1, 1927)

Registration No.	Location	Name of Laboratory
78	Albion	Albion College, Department of Biology
79	Alma	Alma College, Department of Biology
74	Ann Arbor	Hygienic Laboratory, University of Michigan
75		Cowie Hospital Laboratory
82		Michigan Biological Supply Co.
70	Battle Creek	Nichols Memorial Hospital
73	Detroit	Harper Hospital
65		Parke Davis & Co.
67		Robison Laboratories, Inc.
76		Detroit Clinical Laboratory

77	Grand Rapids	Grand Rapids Junior College, Dept. of Biology
80	Holland	Hope College, Department of Biology
84	Jackson	Foote Hospital
81	Kalamazoo	Upjohn Company
69	Lansing	St. Lawrence Hospital
72	Laurium	Calumet Memorial Hospital
68	Mt. Clemens	Dr. Persson's Laboratory
66	Petoskey	Petoskey Hospital
71	Pontiac	City Hospital
83	Roseville	F. T. Zieske, M. D.

PREVALENCE OF DISEASE

	November Report Cases Reported			
	October 1927	November 1927	November 1926	Av. 5 Years
Pneumonia	239	361	363	371
Tuberculosis	523	453	242	391
Typhoid Fever	78	62	50	94
Diphtheria	403	496	710	817
Whooping Cough	442	389	492	416
Scarlet Fever	489	815	970	1,037
Measles	140	526	324	511
Smallpox	38	72	83	143
Meningitis	8	12	3	9
Poliomyelitis	91	34	6	24
Gonorrhea	1,057	725	912	866
Syphilis	1,367	1,099	1,308	1,013
Chancroid	9	14	10	10

CONDENSED MONTHLY REPORTS

Lansing Laboratory, Michigan Department of Health
November, 1927

	+	—	+-	Total
Throat Swabs for Diphtheria				1029
Diagnosis	31	463		
Release	66	132		
Carrier	4	310		
Virulence	21	2		
Throat Swabs for Hemolytic Streptococci				667
Diagnosis	121	232		
Carrier	43	271		
Throat Swabs for Vincent's	20	470		490
Syphilis				5895
Kahn	847	5008	37	
Wassermann		2	1	
Darkfield				
Examination for Gonococci	192	1108		1300
B. Tuberculosis				350
Sputum	72	288		
Animal Inoculations	8	47		
Typhoid				188
Feces	7	68		
Blood Cultures	4	29		
Widal	10	65		
Urine		5		
Dysentery				43
Intestinal Parasites				23
Transudates and Exudates				166
Blood Examinations (not classified)				143
Urine Examinations (not classified)				325
Water and Sawage Examinations				628
Milk Examinations				93
Toxicological Examinations				8
Autogenous Vaccines				6
Supplementary Examinations				340
Unclassified Examinations				434
Total for the Month				12193
Cumulative Total (fiscal year)				61343
Decrease of this month last years				166
Outfits Mailed Out				16883
Media Manufactured, c.c.				285811
Antitoxin Distributed, units				50356000
Toxin Antitoxin Distributed, units				177500
Typhoid Vaccine Distributed, c. c.				1480
Silver Nitrate Ampules Distributed				3088
Examinations Made by the Houghton Laboratory				1489
Examinations Made by the Grand Rapids Laboratory				5852

University Hospital Clinic

December 17, 1927

In Ann Arbor, Friday and Saturday, November 18th and 19th, a clinic was held under the auspices of the Post Graduate Department of the Medical School and the Michigan State Medical Society. This clinic was attended by about 300 of the leading practitioners from the entire state, and it was held in the new University of Michigan Hospital. The Galens, an honorary society, among the medical students, volunteered as ushers and conducted the visiting physicians throughout the hospital. The program began at 9 o'clock Friday morning in the numerous operating rooms and laboratories.

The following clinics were held in the operating rooms on the third floor.

In the Department of Surgery, Dr. Cabot did a cholecystectomy and one stage prostatectomy. Dr. Coller did a stenosing ulcer of the duodenum and a goitre (steal). Dr. Peet did a linear craniectomy and two cases of oxycephaly. Dr. Alexander performed a phrenicectomy for tuberculosis, an extrapleural thorocoplasty and a chronic empyema. Dr. Eberbach operated on a patient for cancer of the prostate. In the gynecology operating rooms, Dr. Peterson did a panhysterectomy and a plastic operation. In ophthalmology, Dr. Parker did four cataract removals under local anesthesia, the removal of a pterygium, an enucleation and a plastic. In the oral surgery operating rooms, Dr. Lyons first did a plastic operation on a small girl for a hare lip and this was followed by another plastic operation for cleft palate. In the otology operating rooms, Dr. Furstenberg and Dr. Canfield did six tonsillectomies, a bilateral antrum puncture, a simple left mastoidectomy, a left radical mastoidectomy, and a laryngectomy.

Members more interested in diagnostic methods and internal medicine had their choice of several demonstrations Friday morning. In internal medicine, Dr. Newburgh held a demonstration from 12:00 to 1:30 o'clock in the research laboratories on the basement floor, of modern apparatus used in the study of nutritional problems. All visiting physicians were shown the new pendulum balance for the accurate weighing of patients on reduction diets; the

various gas exchange machines and the methods used in this clinic for the study of all problems of metabolism. Dr. Newburgh and Miss Harrington also gave a demonstration and a discussion of the various diets used in the treatment of diabetes mellitus and obesity. All of the various diets were made up and placed on trays so that each physician could see how much food and what type of food each patient got for each meal.

Dr. Wilson gave a demonstration of the equipment and apparatus used in modern electrocardiographic studies and this demonstration was followed by informal discussion. At the Simpson Memorial Institute, from 10:30 until 12 o'clock, Doctors Sturgis, Isaacs and Smith, by demonstrations and discussions, gave to all visiting physicians the differential diagnosis and treatment of the various anemias. All physicians were also shown throughout this new research institute. The Department of Roentgenology and Radiology gave two demonstrations between 10:30 and 12 o'clock. The first, conducted by Dr. Hickey, was of numerous plates showing the use of the orthodiagraph in cardiac measurements of non-tuberculous disease of the chest and of numerous gastric cases. The second demonstration was given by Dr. Ernst A. Pohle, who conducted the physicians through the Roentgenology Department and gave a demonstration of dessication and electrocoagulation in the treatment of malignant disease and the clinical application of diathermy. Following the morning session, all visiting physicians were invited to a luncheon from 12:30 to 2 o'clock at the University Hospital.

The afternoon session opened at 2 o'clock, first, with a clinical pathological conference conducted by Doctors A. S. Warthin and Carl V. Weller. Cases of carcinoma of the blood-forming organs, empyema of the lung, and cancer of the lung were presented. These were discussed from the medical, surgical, and roentgenological aspects, and then finally the pathological study was given. At 2 o'clock in the hospital amphitheatre, Dr. Carl E. Badgley presented a clinic on the treatment of delayed union and ununited fractures. At 2:30, Dr. Frederick Coller gave

a clinic on the treatment of hyperthyroidism. From 3 to 5 o'clock, a combined clinic was held by Doctors Newburgh, Camp, Wile, Hickey, Warthin and Peet, on endocrine disease. The first case was presented by Dr. Camp and was a very definite case of acromegaly. The metabolic aspect of this case was then discussed by Dr. Newburgh; the dermatological phase by Dr. Wile; the roentgenological studies by Dr. Hickey, and finally, the surgical possibilities of such cases were discussed by Dr. Peet. The next case was that of myxoedema, which was presented by Dr. Newburgh and discussed from the various aspects by Doctors Camp, Hickey, Warthin and Peet. The clinic was concluded by the presentation of a case of crypt orchidism by Dr. Wile, and the effect of such a condition was discussed from the metabolic standpoint by Dr. Newburgh, and the neurological and psychological by Dr. Camp. The pathological changes expected to be found was discussed by Dr. Warthin.

The attending physicians were the guests of the Michigan State Medical Society at luncheon at the University Hospital and were entertained at dinner at the Michigan Union by the Department of Post Graduate Medicine. Following the dinner, Dr. W. D. Henderson, of the Department of University Extension, gave a most interesting address, which was followed by a round table discussion on past and present medical problems by the members attending the dinner.

On Saturday morning, in the hospital amphitheatre, Dr. D. C. Balfour, of the Mayo Clinic, gave a very interesting clinic on surgical diseases of the stomach. The meeting officially closed at the end of this clinic and a great many of the visiting physicians stayed for the Michigan-Minnesota football game held that afternoon. It was, indeed, a highly exciting game and saw the passing of two rival captains who will go down as two of the best football players in the history of Michigan and Minnesota.

SYNOPSIS OF AN ADDRESS

Dr. W. D. Henderson

Michigan Union, Ann Arbor, November 18, 1927

Ladies and Gentlemen:—During the past twenty years or more I have had an opportunity of speaking in practically every city, town, village and hamlet in the state. This experience has brought me into contact with people of every grade and position. I believe I am safe in saying that I know the mind of the people of

Michigan as well as, or possibly better, than any other member of our faculty. During these years I have been an interested student of the changes which are going on about us—changes involving the economic, social and educational life of our state. I have been especially interested in observing the attitude of mind with which the people of Michigan as a whole approach certain problems. I wish to speak tonight particularly of three tendencies which I think most students of public affairs have observed.

The first of these relates to the new educational movement which is known as adult education. The term, "adult education," as I am using it, applies in a general way to those supplementary educational activities which are carried on by people who, while primarily engaged in the business of earning a living, are disposed to devote a part of their leisure time to study, either along vocational or cultural lines.

You gentlemen who are attending this conference are engaged in a phase of adult education. We used to think of education as coming to an end on the day of graduation. We no longer look upon it in this way. People everywhere are beginning to come to a realizing sense of the fact that education is a continuing process.

The second point to which I refer is the growing interest in the subject of health on the part of our people. One of the most interesting phenomena of our modern educational movement is the extraordinary interest manifested by people everywhere in matters that relate to health. We have, as a people, apparently just discovered that the body is a machine—a most wonderful machine, and as such, requires attention and care. In health education we are just entering the edge of a new day. As an example of this interest in all matters relating to health, we have but to note that practically every first class daily in this country feels under the necessity of carrying on a health column. We have our Bradys, Copelands, Evanses and others too numerous to mention. The fact that papers are willing to pay cold cash for this health column copy is evidence that the people read this material and that editors consider it worth while as a matter of news.

During the past four or five years our Joint Committee on Public Health Education has done a piece of pioneer work in this state. I believe Michigan was the first state to organize such a committee. The function of this organization is to present

the fundamental facts of modern, scientific medicine for the purpose of building up sound public opinion relative to the question of public and private health. It is concerned in bringing the truth to the people, not in supporting or attacking any school, sect, or theory of medical practice. It aims to send out teachers, not advocates.

Last year we gave 550 health lectures throughout the state, a large part of these being given in connection with high school programs. It is worthy of note that in every one of the ninety-one schools where these health programs were carried on last year, the superintendents or principals connected therewith have asked for a continuation of the work this year. In this connection I wish to express my appreciation for the splendid service rendered in connection with our health program by the physicians of the state, members of the Dental Society, and others interested in health work.

The third and most significant statewide movement, so far as the social and civic life of the people is concerned, is that known as the Community Center movement. Within the past few years, there has arisen in this state, as in many others, a form of activity looking toward the organization of community center activities. Michigan has the distinction of being the first state in this country in which there was organized a successful community center activity, comprising an entire county. I am referring here to the Hesperia community center movement in Newaygo County, a project which has been carried on continuously for something like thirty-five years.

The community center activities to which I refer represent attempts on the part of certain public-spirited men and women, especially in the smaller centers of the state, to create a public sentiment in favor of social, intellectual, and civic betterment. The movement is in the main altruistic in its ideals. The primary agencies through which such activities function are the schools and community churches. In some centers this movement has gone forward with remarkable success, but in far too many cases it has lagged, due largely to the need of leadership and direction. I have a feeling that every college and university graduate has a very definite responsibility in connection with the social, civic, and intellectual activities of his community. His first business, of course, is to master the details of the calling which he has chosen, be it teaching, preaching or

the practice of medicine. If he has a true appreciation of the opportunities which are his by virtue of his training, he cannot escape the responsibility which rests upon him to take some part in this community center movement, whether he find himself located in a city, small town, or in country places. All too frequently, doctors have kept themselves aloof from such civic and socializing activities. They have felt that their energies should be directed altogether to the practice of their profession. What man, let me ask, in a community is more vitally in touch with the life of the people than is the physician? He is looked upon as one who has had the advantage of a scientific training, and, in general, his word carries great weight. I believe, gentlemen, that it is possible for you to render to your various communities a most effective service in connection with these community activities. Here is an opportunity to come into contact with your environment in an entirely new way, an opportunity not only to play the part of the healer, but also that of the teacher and counsellor as well. If we find, as some state, that people are inclined to turn away from the medical profession and to follow after cults and fads, I am sure that the doctors themselves are in some measure to blame. So far as community activities are concerned, we are entering a new stage in our civic and social life. People have awakened to the possibilities of adult education. They are interested in public health in a way that is not only new, but extremely significant. Are we to expect that only teachers, preachers, and public-spirited business men are to be the active agents, and later on, the directors in this new movement? I hope not. I believe that every doctor has a part to perform. His business, as I see it, is not only with the writing of prescriptions and performing operations, but also in assisting in the direction and control of the intellectual, social, civic and health life of his community.

May I repeat: the doctor should be not only a healer, but a teacher as well.

ADDRESS

James D. Bruce, M. D.

Mr. Chairman, Ladies and Gentlemen: I approach the subject of extension work in Medicine with a good deal of trepidation, not only on account of its somewhat nebulous state at the present time, but also on account of the presence of a man who has carried the extension idea along other

educational lines to such a high point of efficiency and of value to our state. A further reason for my hesitancy in the discussion of a topic having to do with medical education, is the fact of my comparatively recent association with problems of this character. As one recalls the changing viewpoints and opinions of the last few years, opinions that were founded upon seemingly substantial information, one may well hesitate to outline a course that involves more than the very immediate future.

I had the privilege some time ago of reading a letter from a man who always has been my ideal physician, the late Theodore McGraw, for many years Dean of the Detroit College of Medicine. Great changes had been taking place in methods of medicine teaching and in educational standards with the result that for years, one after another of the more poorly equipped and meagerly provided for medical schools, had been closing their doors.

Dr. McGraw, who had for many years been a leader in medical education in this country and more responsible than any other for the prestige of the Detroit College of Medicine, came to the conclusion that that institution had served its usefulness and that the University of Michigan Medical School was amply able to take care of the educational needs and responsibilities of this state. With the consent of his faculty and board of trustees, he offered the buildings and all of the physical equipment, together with the use of all the clinical facilities at their disposal, to the University of Michigan. At the same time, he advanced the opinion that the clinical opportunities at the University Medical School and Hospital were altogether inadequate for the successful teaching of medicine and that they never would be ample and advised that the clinical years of the University Medical course be removed to Detroit where ample material was available.

Here was a great man, personally familiar with the educational needs of his time and community, advancing an honest opinion with the information that he had at hand. Notwithstanding that Dr. McGraw's opinion was shared by a great many of those concerned with medical education in Michigan, certain developments prevented the acceptance of the offer and the Detroit College of Medicine carried on and under the able administration of its present distinguished dean, has taken high place and done a magnificent work

and filled a great need in the education of doctors in Michigan and today stands relatively higher in the educational world than ever in its history. In Ann Arbor, contrary to the best opinion of those days, there has been developed clinical material entirely adequate for the successful teaching of medicine.

In 1904, there was graduated 5,747 students from the 166 schools then in operation in this country. It was considered quite generally the number of medical schools and supply of physicians was at this time greater than the demand. The rising standards, together with the classifying of medical schools, soon brought about a most remarkable change. One by one, the more loosely constructed and poorly supported schools have either joined up with state universities, amalgamated with other schools for mutual strengthening, or dropped out of the race.

In the year 1926, 3,962 were graduated from 78 schools, only 69 of which gave the full four years course. Not only have the number of schools been cut down and the number of graduates greatly reduced, but a definite overcrowding of the remaining schools makes it extremely difficult to offer a well-balanced course. The specialties, together with the emphasis placed upon research, have so divided the issue as to give grave concern for the perpetuation of that group so long regarded as the backbone of the profession,—the general practitioners.

With the broadening of the medical course, incident to increasing knowledge, it seems undesirable to increase the number of graduates from the schools now in operation. Carefully worked out statistics show that 129,000 physicians now under 65 years of age in this country, will, at the present trend of production, drop to 114,000 in 1945 and this in the face of an increasing population that will add 50 per cent to the responsibilities of physicians at that date. With a 30 per cent reduction in our medical graduates and 116 per cent increase in the cults in the past twenty years, the proper care of the sick will show increasing difficulties unless this problem is carefully considered and wisely provided for.

Last year, approximately 1200 candidates applied for admission to the Detroit College of Medicine and the University Medical School. Of these, it is estimated that some 200 had made applications elsewhere. However, the University Medical school accepted, in round numbers, 200, and the Detroit College of Medicine, 125.

Almost 700, who seriously hoped and expected to gain admission, were rejected.

This is neither the time nor the place to discuss all the problems that arise through this situation. The problem of selection out of this large number is one of great difficulty and what becomes of those whose desire it is to enter medicine but to whom the opportunity is denied, is a matter of concern. Aside from the question which concerns the supply of physicians for the coming years as determined by the very obvious trend of medical education, there arises another problem and that is the expediency of first rate schools like the Detroit College of Medicine and the University Medical School undertaking the education of almost twice the number of students that, according to very good opinion, can be done to the advantage of the student himself, to those he will later serve, and to the reputation of the school itself.

The functions of a medical school and particularly of a tax-supported medical school such as ours, may, I believe, be divided into three. First, the training of doctors. To this, the state has added a second obligation, the care of patients. Second, the development of research and the training of teachers for the various sciences making up medicine. Third, provision whereby the graduate may maintain a continued contact with medical progress to the end that he continue as a student of medicine always.

Thirty and forty years ago, when the sum total of medical knowledge was relatively small, and before the relationship of the collateral sciences had been brought into the prominent positions they now occupy, these primary functions were relatively easy of fulfillment. Discoveries in the fields of science, with their many interrelations, have greatly complicated the teaching problem and today, even with the added years in the curriculum and greatly increased personnel, the business of turning out a well-rounded graduate is becoming increasingly difficult. The necessity for adequate laboratory training is apparent and students profit greatly through association with trained research workers. Liberal provision must also be made for the specialties in the regular undergraduate curriculum but the relation of these problems to the practical clinical side and their satisfactory correlation is still difficult of fulfillment.

The point I have particularly in mind is that the field of Medicine has become so

broad and the various scientific bypaths of research, investigation, and teaching are so alluring that the tendency to wander from the primary medical school function, which is the making of doctors, whose place in society is primarily the care of the sick and the prevention of disease, has been too often lost sight of. That the number of our medical schools has been reduced to a minimum, no one doubts. Notwithstanding their overcrowded condition, the question of the future supply of physicians deserves consideration. The constantly increasing tendency toward the development of specialties and the gradual broadening of the curriculum add to the difficulties of the teaching problem. In addition to these considerations, we must not lose sight of the fact that the cults, both in kind and number, are increasing very rapidly and there seems much evidence that they are being regarded with increasing favor by the public. The consideration accorded them both in judicial decisions and in legislative enactment gives further emphasis to this statement. These problems have not arisen overnight and do not call for snap-shot remedies.

A greatly enlarged personnel in both our existing medical schools, together with a full year's teaching program, (four quarters system), while helpful in rounding out our present teaching programs, will not make possible an increase in our graduates.

Lowering the requirements for admission and shortening the course has been offered as a remedy for the scarcity of doctors in the rural communities. That this is not the answer to this problem is borne out by Pearl's painstaking investigation, in which he finds that the man with a college degree is relatively as likely to settle in a rural community as is the man slipping by with just the bare requirements for admission. In fact, the more poorly equipped he is, the more apt we are to see him finding his richest returns in the more populous centers.

While there will be other and possibly more adequate solutions of the many problems suggested as time goes on, a very simple and obvious one appears near early fulfillment.

By increasing the efficiency of our profession, by placing within its reach opportunities for developing greater accuracy in diagnosis and improvement in technic, our range of usefulness becomes wider, more people will be served and better served. The responsibility of increased

practice and one that requires greater technical skill adds to our interest in our work, to the importance of our position in our communities, and, incidentally, to our income. By increasing the ability to do more and better work, the smaller towns and cities become increasingly attractive and it does not seem unreasonable to think that they may again become centers of medical service.

If society is to be adequately served and if the regular medical profession is to continue to care for and to lead the way in matters of both private and public health, obviously it must be kept in contact with the workshops of medical progress. To this end, the Board of Regents has, as many of you know, complied with the recommendation of Dean Cabot and President Little in the establishment of a Department of Post Graduate Medicine in the medical school. This action on the part of the university was due largely to the solicitation of the State Medical Society that its members be accorded the privilege of medical school contacts after graduation. That the university has recognized the need for this work and is making provision for its maintenance is a matter of congratulation to both the profession and to the university.

Following the lead of the splendid work the State Medical Society has begun through its Post Graduate Conferences, it seems to us that a great deal more extramural teaching may be gotten under way in the near future as well as the development of institutional courses.

While plans are under discussion with our faculties and with men throughout the state, I do not feel in a position to make an authoritative statement at this time regarding a definite program. It may be said, however, that our plans involve the utilization to the fullest of our available resources for the benefit of our state membership. A large number of men throughout the state, already participating in the Post Graduate Conferences of the State Medical Society, have signified their willingness to join in this program.

In the larger cities and in Detroit especially, I am looking forward to Post Graduate teaching on a scale which the character of their medical men and the quantity of their clinical material would seem to justify. Both Detroit and Ann Arbor have been tardy in assuming the responsibility for the definite program in Post Graduate teaching, but with the rapidly increasing hospital facilities in De-

troit and in other cities throughout the state and the greater opportunities incident to the recent building extensions in Ann Arbor, there seems no good reason for further delay.

There are those who believe that a fully equipped Post Graduate School with adequate centralized staff, laboratories, and hospital connections, should be our objective. It does not seem to me that this is a matter for special consideration at this time.

Our immediate duty is the correlation and utilization of our present resources. This is a broad co-operative movement in which every doctor in Michigan is a working partner. The measure of success will depend upon the sincerity and intelligence with which we approach the problem and the zeal with which we apply ourselves to the task.

ADDRESS

Andrew P. Biddle, M. D.

Mr. Chairman, as I am deeply interested in much of what you have said, may I add a few words in regard to one of the subjects you have brought to our attention, namely Post Graduate instruction through the establishment of a Post Graduate Medical School? I want it understood, however, that I am not speaking officially as Chairman of the Committee on Medical Education of the Michigan State Medical Society, nor as representing any school or hospital in Detroit, but am presenting simply my own views, formed after years of earnest thought on the subject with the hope that a practical, working solution may be found. That the profession of Michigan desires and appreciates Post Graduate instruction is attested by the presence of so many of us here tonight after a day of witnessing the excellent program presented by the Faculty of the Medical School.

My undergraduate study consisted of three years of collegiate work with two years of hospital internship. My years of practice are now more than forty. It is readily seen that the undergraduate work is merely a preparatory course which permits one to get an insight into the science and art of medicine and to be licensed to practice. Were all of us to stop at this threshold, no progress could be made and the wonderful advancement of this science and art during the last fifty years would never have been witnessed.

From what you have said, Mr. Chairman, I am fully convinced that the situa-

tion now offers a working basis. The essentials to the launching of a Post Graduate School and to its continuance rest first on an organization with years of experience in teaching; secondly, on a faculty composed of medical men with large clinical experience, and the ability and desire to teach; and, thirdly, on proper facilities for instruction. In Ann Arbor, with its university with a prestige second to none in this country, with its years of experience in extension division work we have the first essential fulfilled, a centralized, organized body ready to assume responsibility and ready to co-operate. In Ann Arbor, in Detroit, and throughout the state we have the men from whom the second essential, an experienced faculty, can be drawn; and thirdly, we have in Detroit an abundance of clinical material, were such material brought under organization. I am firmly of the opinion that any faculty chosen from Ann Arbor or Detroit should be distinct from the undergraduate teaching body as such, but should be extramural, to which other teachers and clinicians should be invited. We should take advantage of the experience of the Graduate School of the University as well as the newly organized Department of Post Graduate Medicine, which has been authorized by the Board of Regents in response to the recommendation of the State Medical Society. I believe that a committee of these bodies should invite cooperation with one appointed by the profession of Detroit, preferably the Wayne County Medical Society, in order that the profession might be thoroughly represented in the details which must be attached to the inauguration of this work.

As I vision it, the prestige and power of our great University should be the foundation stone and the background of this endeavor and from here should arise the initiatory and propelling force. Here, in my opinion, should be taught, not only clinical subjects, but within its great laboratories such fundamental subjects as Anatomy, Pathology and Bacteriology. And in Detroit, with its wealth of clinical material, its splendid hospitals, and its varied teaching facilities, should be established extensive Post Graduate teaching. I am entirely in accord with the plan as outlined by Doctor Bruce, which, if I understand it rightly, does not have for its immediate objective a Post Graduate Medical School, but suggests that we proceed to correlate all our resources for the ad-

vancement of medical knowledge and in the interest of the state.

I understand that such a course has received the approval of the President of the University and has been accepted by the Regents, and am sure, after the details have been ironed out, will be sanctioned and aided by the profession of Detroit.

Such a school, fostered by the State Medical Society, the University, and Detroit, offers Post Graduate instruction second to none. It should in time offer definite instruction to the physician desiring to take up one of the specialties; should be empowered by law to give recognition for the work done; and would reflect the earnest desire of the profession that our institutions of learning and our vast clinical material be placed at the disposal of the profession at large for the advancement of medicine and surgery.

DR. McLEAN FAVORS GRADUATE MEDICAL STUDY

Dr. Angus McLean was called upon to address the meeting. The doctor, who has been for some years a member of the Board of Education of Detroit, was enthusiastic in the matter of graduate medical education. The Detroit College of Medicine and Surgery is a unit in the educational forces of Michigan's metropolis. Dr. McLean went on to tell how much Detroit spent annually in education. Of the sum mentioned, approximately \$33,000,000, only about \$7,000,000 went for new buildings, the remainder of this sum being spent on salaries and maintenance including the medical college.

Dr. McLean dwelt upon the clinical facilities afforded by the various units of the city hospitals. About 1,000 patients on an average were hospitalized at city expense. These might be available for clinical teaching to a much greater extent than they have hitherto been used, at no increased cost to the municipality. The necessary laboratories, amphitheatres and equipment are already in existence.

The utilization of Detroit City hospital and the University hospital would not of necessity exclude the hospitals elsewhere in the state. Such details could be worked out satisfactorily. The fact that the State University possesses the personal as well as the material equipment for teaching gives it a favorable advantage. The clinical facilities of the city of Detroit and the University hospital in a sense supplement each other.

The action of the State Medical Society in endorsing graduate work in medicine

has answered any question as to the desirability of such a movement.

The physician is an individualist, and so far as Dr. McLean could see, always would be. Therefore no such movement as post graduate instruction in medicine could be construed as favoring socialized medicine.

Dr. McLean thought that broadly speaking graduate education ought recognize two classes of student, namely the man who works for credit, perhaps towards a graduate degree and he who goes in for short time work. In the former case men should be given every facility for individual work. They should be active in the work rather than passive and receptive. In fact graduate studies would be pretty much after the method which already prevails at the State University.

Dr. McLean as a member of the Detroit Board of Education assured the audience that Detroit would be willing to co-operate to the fullest extent to make graduate work in medicine a success. To improve the intellectual standing of the physician is a direct benefit to every citizen of the state.

WALTER H. SAWYER, M. D.

Regent of the University of Michigan

Mr. Toastmaster and Friends:

We have keen joy and pride in your visit to Ann Arbor today and your interest in the things we are doing here. Your presence is evidence of the constructive work of the State Society. Looking back over an experience of more than 40 years, the progress of the society in its standing, its ideals, and its beneficence, has been tremendous. It is no longer a loose organization but an institution—an establishment. The fact that such a group is assembled here reveals the incentive which it has inspired. It is a consummation in which all can have a just satisfaction.

As you know, the society is interested in the very important matter of graduate teaching of medicine in the state, and by the university. To this end a committee was named to try and bring this about. As a result of this purpose and effort, the Regents have provided for the initiation of such a course by the following action:

"The subject of post-graduate medical courses was taken from the table. The Board approved the establishment, within the Medical School, of a Department of Post-Graduate Medicine and named Dr. James D. Bruce as the head thereof, with the provision that during the year 1927-1928 a beginning would be made toward placing the work of this department in operation. The organization of the Department of Post-Graduate Medicine is to proceed, under the charge of Dr. Bruce

and under the usual conditions governing a department of the Medical School, along the lines laid down in communications from Dean Cabot."

This does not mean that the university desires to or can do all that is needed in this field. We only plan to do as best we can our part—and trust it will be a creditable part. Today we have an amount of clinical material which we did not even dream of some years ago, and which should be utilized for the benefit of the profession and of the state and country.

Detroit should do the same. You have a fine school and a distinguished group of men with a wealth of clinical material. It should be digested and used, as it is not used at present. You can and should develop your graduate teaching. There is no competition between the University Medical school and the Detroit school. We are as much interested in your growth and development as you can be. If this were not our attitude we would not be worthy of our place in the educational system of the state. Detroit is a great city and is remiss if it does not build a great teaching institution with all that modern conditions demand. Detroit will be better for it and the profession will be what only a profession can be that has the stimulus and urge of teaching.

You can count on the university doing all it can to promote such an effort. We are interested in you and what you do and want your interest in us. We can and should be harmonious and mutually beneficial. Count on our co-operation and helpfulness.

GUY L. KIEFER, M. D.

State Commissioner of Health

The policy recently adopted by the Regents of the University to extend the scope of medical teaching so that practitioners may be able to keep up with the progress of medicine, is commended by all thinking physicians in Michigan. This post graduate instruction, if we choose to so name it, should take advantage of all the many facilities to be found in the state. All institutions from which can be taken something for the benefit of the doctors of the state in the way of medical teaching, should join in this great co-operative plan. The big city of Detroit with its wealth of clinical material and its large number of competent teachers could join in giving post graduate clinical conferences which would far out do the post-graduate conferences now given under the auspices of the State Medical Society and which are so

popular with the profession. Similar work might be added in other cities. All advances in public health work and the proper relation that should exist between public health departments and practicing physicians could be shown by the staff of the State Department of Health at its headquarters in Lansing as well as by various properly constituted, well managed and correctly equipped city health departments in various cities in the state.

The central and chief unit of such a co-operative post graduate course of instruction would properly remain at Ann Arbor and the University of Michigan with its ever increasing building program could well take care of its share of the undertaking. Such a plan, well worked out, would do more to advance the practice of medicine and relegate to the background the practice of cultism than any other that could ever be thought of, to say nothing of being developed. The results to be expected from such post graduate instruction would be a feeling of higher respect and greater confidence on the part of the public for all of the medical profession and very justly so.

DEAN W. H. MacCRACKEN

We regret being unable to publish Dr. MacCracken's remarks for the following reason:

"Your letter of November 27, finds me ill in bed and not able to comply with your request relative to an outline of my brief talk at the dinner given at the Michigan Union on November 18.

If I may trespass on your kindness I will ask you to make whatever statement you see fit on my behalf.

Assuring you that my willingness for co-operation marches hand in hand with your own and with the kindest personal regards, I remain,

Yours sincerely,

W. H. MacCracken, M. D., Dean."

ALEXANDER W. BLAIN, M. D.

There is little doubt in the minds of those here this evening that there is a great demand for post graduate study, not only for the man who has completed his college course and wishes more extensive training along some special branch of medicine, but also shorter courses for the man who has been out a number of years and wishes to brush up; to get the moss off his back as it were.

The great laboratories which are being

developed at the university should be used further in the education of the practitioner than they are at present. In Detroit the clinical material available is enormous. It is gradually being put into better form. About 14 months ago there was established in Detroit the Detroit Post-Graduate School of Medicine, organized as a not for profit corporation under the Michigan laws. The staff is made up of some of the foremost men in connection with the various large clinics. There is no doubt that clinical medicine is best studied and best handled where the clinical material is most abundant.

There is no doubt that the medical men of the future will demand more and more post graduate work at the larger clinical centers. I am most heartily in favor of any effort to push post graduate and research work in Michigan, whether it be the long courses leading to the turning out of trained specialists or in the shorter courses for the older, busier practitioners. There is ample material in Detroit but concrete plans for its full utilization still have to be developed.

HERBERT E. RANDALL, M. D.

President Michigan State Medical Society

The chairman tonight is my friend, your friend, our friend. Dr. Henderson has, I believe, done more for the profession of medicine than any other man outside of its membership. When he quotes the Bible and speaks of human nature, which is not taught in the medical curriculum, perhaps it might be better for medicine students to take a course in theology, rather than in the basic sciences.

The department of medicine has always been doing post-graduate work. I know of several doctors of Flint who have made frequent trips to Ann Arbor and consider it good post-graduate work. The only thing that seems to be lacking is to get organized and to hang out the welcome sign.

There is a peculiar situation developing in this country, touched upon by Dr. Bruce. In Chicago the question was asked, "What do you do when you are taken sick?" A majority of those of whom this question was asked—did not go to see a physician, they went to the drug store, to the drugless cults, osteopaths, chiropractors, and religious healers. And yet the American drug bill last year was 700,000,000 of dollars, and of course this was not all prescribed by physicians. Is medicine meeting the requirement of the people? Are we shut-

ting the front door, while the legislature is opening the back door?

The medical department exists primarily to train students to be physicians, according to its charter. Your existence is only justified when you carried this out, because neither of us believe in socialistic medicine. The aim of the medical department should be to make the under-graduate a general practitioner, also to see that our specialists are truly specialists, not self-appointed and elected. The general practitioner should be the aim of the medical department and the specialist should only be built on the good clinician. The clinician comes back to perfect himself and then calls himself an internist, while other practitioners come back to take up a specialty.

I think many of us feel that the medical course is too long. Yale has recently cut off a thousand hours, and Harvard one-third of the time. Perhaps our whole system is wrong and needs revision. The so-called logical methods leave the student with his knowledge in water-tight compartments. His knowledge is not correlated. For instance, perhaps the best time to study fractures would be while he is studying osteology.

My only personal preference is the natural or the French methods, in which the avowed purpose of medical education is to make a clinician. Under our system today, students are taught by specialists and consequently the graduate has his aim to also be a specialist, rather than a practitioner of medicine. This is the natural fruit of the system.

While Dr. Darling is to be credited with having suggested these meetings for informal discussion for medical education and co-operation between the state society and the faculty, we all recognize the generous reception given to us by the faculty and regents. Today is another day, evidencing the desire of our state university to further the interests of better medicine and of their hearty desire of co-operation.

Someone has pictured the future doctor as having a Pantechnicon waiting out in front of the house, while he goes in and asks the patient what he thinks is the trouble. A Pantechnicon is a moving van with X-ray and chemical and microscopical laboratories with assistants in each line.

Frank Billings says that the painstaking general practitioner makes an accurate diagnosis in a great majority of cases and Bevans says that 90 per cent of the patients require no hospital treatment.

It would seem that medicine would become more simple instead of more complicated as it becomes a true science. What we really know, seems very simple, and the laboratory is only necessary in, say less than 25 per cent of the cases for diagnosis.

What I am pleading for is training of young men to use their senses to make a diagnosis rather than dependence on the laboratory.

The general practitioner, as a rule, does not do his own laboratory work. The specimen is sent to the laboratory. Medicine is still an art—cannot be taught in a medicine course.

Post-graduate work then should meet the needs of two classes of physicians. First, the man who wants to brush up. He will become the internist. And second, is to care for the general practitioner who comes back to take up a specialty.

Perhaps we are attempting too much with the undergraduate and not enough with the graduate. I suspect we are still carrying too much of the philosophy and scholastics of the middle ages down to just the beginning of the scientific age of medicine.

The regents of the University of Michigan are to be congratulated on their vision that medical science, being progressive, a medical course is never finished.

DEAN HUGH CABOT, M. D.

It had not been my intention to discuss the subject of post-graduate teaching this evening, since it appeared to me to be in very capable hands. It will perhaps, however, be proper to review the situation briefly in its relation to the medical school.

It cannot be doubted that at this period in the development of medical practice opportunity for post-graduate study is of more importance than at any earlier time. The science of medicine is undoubtedly moving more rapidly and there are constantly being added methods of diagnosis and treatment, the precise value of which can only be determined by their wide use in the practice of medicine. It therefore follows that the contemporary practitioner will fall behind more rapidly than heretofore and that there is more need of his intimate relation to the newer possibilities than has been the case in the past. It is also true, as has been pointed out by Dr. Bruce, that the number of physicians in relation to the population has decreased importantly with the consolidation of med-

ical schools and that this decrease will continue for some time. On the other hand, I think evidence is lacking to show that the proportion of physicians to the population has in fact fallen to the point where there is any shortage or in fact, any probability of a real shortage. It does mean, however, that the physician must keep more thoroughly abreast of the times and that opportunities must, therefore, be provided to enable him to do so. With this need the university is familiar and has been at all times in complete sympathy. When the matter was first brought to our attention by the Council of the Michigan State Medical Society, it was carefully considered, forwarded to the Board of Regents with recommendations for action and that board duly set upon it the stamp of its approval. It will be obvious that the matter is so important and might readily involve the university in so much added expense that progress must take place slowly. It would be easily possible to involve the state through the university in an expensive and not wholly profitable experiment. With this in view, and yet being in entire sympathy with the program, the Board of Regents has established a department and appointed Dr. Bruce as Director of Post-Graduate Medicine. This creates the machinery necessary to organize our work here so that it may become available as soon as possible for this purpose and also to study the various other methods by which medical extension may be made most useful.

It is my own judgment that the post-graduate work of the university should not be confined to the members of the faculty here at Ann Arbor, but should call to its assistance men practicing in the other medical centers of the state and attempt to correlate the teaching which they might do with that which can be best given here. I can see no cause of complication between the interests in other medical centers and those at Ann Arbor. We are all anxious to do the same thing; namely, enlarge the opportunities for post-graduate study and make the widest possible use of teaching material. The development of a post-graduate school in Detroit would be in everybody's interest and should conflict in no way with any other development which might take place here. I am wholly in sympathy with such development; believe that the necessary machinery has been set up and that we can properly expect steady progress in this important field.

I wish particularly this evening to set

before you some evidence of the working of the apprentice system which, as we announced a year ago, we are trying to work into the medical curriculum. It was suggested at that time that it would be desirable to bring students into contact with the general practice of medicine during their college course and that we hoped to do this by, so to speak, apprenticing undergraduates to general practitioners during the summer between their third and fourth years. During this last summer, we have tried such an experiment on a small scale by sending out ten students to spend a period of two months with a general practitioner who had agreed to look after him and who was, therefore, appointed by the Board of Regents as a "Preceptor of Medical Students". I have corresponded with these physicians and interviewed the students. The results appear to me wholly satisfactory. The preceptors unanimously report that the students were interested, did their work well and proved themselves helpful. The students are very enthusiastic. They all believe that their view of the field of medicine has been importantly enriched. They feel that they are bringing to the final year of their course a somewhat better understanding of the work in which they will be engaged and they all agree that it has been of great value to them.

While this is, of course, an experiment on a very small scale, it seems to me sufficiently encouraging so that we ought to extend it with a view to determining whether it will not be possible to incorporate it in the curriculum in such a way that it will give this opportunity to all students. It is, therefore, our intention to extend the work during the coming summer. It will go without saying that the success of this will depend entirely upon the cordial support of the profession. Without this it cannot go far; with it, I have little doubt of its success. It appears to me one of the best methods of keeping the profession in touch with medical education and thereby enabling us to take advantage of suggestions for improvement of the course based upon intimate personal contact with the students. I appeal, therefore, to you gentlemen to assist us in this work.

Some reference has been made this evening to the length of the medical curriculum and its apparent tendency to grow longer. This has been regarded in some quarters as seriously objectionable in that it brought the student to his active work

later in life than was desirable. Of the soundness of this conclusion I am somewhat doubtful. It seems to me that the public is taking a very different view of the young practitioner from that which it entertained a generation ago. All of us can remember the lean years of early practice while we waited for older men to die and until our appearance lost its youthful character and we were regarded as sufficiently mature to assume the responsibility. Today the public is much more prepared to accept the advice of younger men and I think this attitude is based upon the belief that they are in fact better trained than was the case in our day. The younger practitioner is now much more nearly on a par with his senior colleague and can expect to step rapidly into active practice without the earlier period of waiting. From this it appears to me to follow that some additional maturity is not only desirable but essential. If the public has come to regard him as a satisfactory counselor, he must in fact be better equipped to play the part and the mere time element now expended on his education appears to me to be an advantage rather than a detriment. Not so long ago the average practitioner of medicine was in fact a better educated man than almost any of the other members of his community with the exception of the minister and perhaps the lawyer. Today education is much more widely spread. The physician is not in fact better educated and does not, therefore, take high position in the community through the mere fact of his education. A broad and reasonably long period of study is needed if he is to be equipped to hold his own in a community which will expect of him not only a knowledge of the science and the art of medicine, but also sound judgment upon the many economic and social problems of the day which are inseparably bound up with the ills of mankind. We do not want, and we should not tolerate, any tendency on the part of the medical profession to fall back from the high estate which it has always occupied. If such a decline is to be avoided it can be most surely prevented by seeing to it that the breadth and depth of the education in medicine keeps pace at least with the advancing level of education in general.

PRESIDENT COOLIDGE ON FEDERAL AID TO STATES

A few years ago President Coolidge expressed himself as definitely opposed to that plan whereby the federal government allocates certain sums to

the states which are willing to allocate similar sums for special purposes. In his budget message submitted to Congress, December 7, the President again announced his views on this point. He pointed out that the authorization for the promotion of the welfare and hygiene of maternity and infancy expires in 1929, and that the last extension of the act was approved with the understanding that its administration during the two added years would be with a view to the discontinuance of federal aid thereafter. That he considered the dangers inherent in the policy of federal subsidies to the states of far greater importance than any financial burden that might be incurred is shown in the following statement:

To relieve the states of their just obligations by resort to the federal treasury in the final result is hurtful rather than helpful to the state and unfair to the payers of national taxes. To exempt the states by federal subsidies to sacrifice their vested rights is not a wholesome practice no matter how worthy the object to be attained.

Federal interference in state functions can never be justified as a permanent continuing policy, even if, which is doubtful, such interference is warranted by emergent conditions as a temporary expedient. As shown in the maternity and infancy act, when once the government engages in such an enterprise it is almost impossible to terminate its connection therewith. We should not only decidedly refuse to countenance additional federal participation in state-aid projects, but should make careful study of all our activities of that character with a view to curtailing them.

It will be interesting to observe whether the too enthusiastic proponents of this legislation will endeavor again to urge its passage, regardless of the President's views and of their tacit understanding with the federal government.—*Jour. A. M. A.*, Dec. 24, 1927.

COUNTY HEALTH WORK

Charles H. Laughinghouse, Raleigh, N. C. (*Journal A. M. A.*, Dec. 24, 1927), suggests that medical education should devise ways and means to prepare physicians in the future to practice the specialty of public health more capably. The office nurse for the rural physician should be popularized. Boards of health could add nothing to their present plan of prevention of disease which would show more immediate and more satisfactory results than the institution of training schools for nurses whose specialty would be to give assistance to the physicians in rural districts who are practicing general medicine. Extension courses by medical colleges for the purpose of bringing special training to the very doors of the rural physicians themselves in isolated communities would prove of untold benefit in the development of county health work. Lectures and clinics by itinerant teachers in the small towns and country communities to which the local profession could be invited and in which the early diagnosis and prevention of disease could be taught and stressed would mean much to the furtherance of county health work and to the attractiveness and safety of rural life.

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

ANNUAL MEETING OF THE COUNCIL

The annual meeting of the Council of the Michigan State Medical Society will be held in Detroit, at the Book-Cadillac hotel, on January 11th, 1928, at 9:00 a. m., fast time. The regular order of business will consist of all matters pertaining to the affairs of our Society.

R. C. Stone, Chairman.

Attest: F. C. Warnshuis, Secretary.

SURVEYS OF SURVEYS

The Bureau of Public Health and Instruction of the A. M. A. has conducted a partial study of the number and scope of surveys that deal with public health and which have or are being conducted. The study covers a period of some twenty years and uncovers some interesting facts. Practically every phase of public health has been touched and every state in the union has been a field of work. There have been some 982 separate investigations, and the United States Public Health service is credited with 1,013 surveys.

In Michigan we have had 32 surveys classified as: Cities 7, General 2, Maternity and Infant 2, Venereal 14, Tuberculosis 1, Sanitation 1, Health Education 3, and Miscellaneous 2.

As one surveys these surveys many questions arise: What was accomplished? What were the conclusions? What was the need? Were the findings followed up and corrective measures instituted? Was there a subsequent check-up?

Then, too, was there not destructive confusion and reduplications? Could not these facts be obtained just as adequately with less cost and labor in the decennial census? We are of the opinion that the majority of these surveys serve but one main purpose and that is to give employment to a horde of so-styled directors, supervisors, field agents, canvassers and secretaries at given salaries and expenses.

The preliminary facts seem to warrant the conclusion that the utter uselessness of a majority of surveys should be widely disseminated for the public's information. Also, that the money expended for these

surveys might well be appropriated to more worth-while objects. There are far too many incompetent, social economists preying upon the public in their useless endeavors and far too insufficient worth-while, constructive work.

FLINT ORTHOPEDIC SCHOOL

Three years ago a small class was organized and a teacher was employed by the Board of Education for the education of Flint's crippled children. That group has gradually increased. Last year there were 40 children enrolled and another teacher was added. This year Flint has an Orthopedic school with an enrollment of 80 children and a staff of three teachers, an occupational therapist, a physiotherapist, a matron and an attendant. Another teacher will be employed the second semester this year. Space and equipment are being provided as the needs arise.

The Rotary club of Flint, employs the services of a graduate nurse who spends several hours daily at the Orthopedic school assisting with physiotherapy and inspecting the corrective equipment worn by the children.

The children are transported to and from school in taxicabs. They are given milk and a warm lunch prepared by the matron at noon. They are taught various kinds of occupational handwork as well as the regular academic work. They receive massage and muscle training according to their conditions.

All expense for this Orthopedic school is cared for by the Flint Board of Education.

Every child in the school has been examined in the school orthopedic clinic which is held once a week for the benefit of Flint's crippled children.

More than 50% of the children in the Orthopedic school have had infantile paralysis, about 10% are spastic paraplegia and 40% have osteomyelitis. A few have congenital deformities and a few are crippled because of accidents.

All of the children of the Orthopedic school are under medical care.

G. J. Curry.

SCIENTIFIC PROGRESS LAST YEAR

Scientific progress is recorded with each passing year. The tenets of yesterday are discarded as new, proven knowledge refutes their tenability. New principles, new facts beget new methods and more efficacious therapy. All these advances demand an ever constant alertness lest one drops to the rear of professional capability. To remain abreast, to apply in our daily work modern methods and practices requires constant, sustained reading, study and attendance at medical meetings. In no other way can one keep pace with the advance.

It is to that end, to aid our members, that we requested certain of our members to prepare for *The Journal*, a brief citation of the progress that was recorded last year in the several main branches of medicine. They have complied with our request and their comments are herewith submitted for our members' information.

PROGRESS IN CARDIOLOGY FOR THE YEAR 1927 M. A. Mortensen, M. D.

It is impossible to consider all the literature that has been published on this most important subject. The abundance of literature shows the keen interest the medical profession is taking in the cardiovascular problem which is perhaps one of the most important from the standpoint of morbidity and mortality at the present time. Some new work has been offered and much important follow-up work has been done and I will attempt to refer to it in the following groups:

Physiology: Yandell Henderson and associates offer additional reports on the study of cardiac efficiency by the ethyl iodide method presented by them two years ago. They consider that cardiac efficiency is based on the volume of the blood pumped by the heart in relation to the oxygen requirements of the body. Their recent studies confirm the conclusion of their earlier investigation and as new work they offer definite evidence that the use of tobacco materially decreases the efficiency of the heart.¹

The use of the electrocardiograph is evidently becoming more widespread and the continued study of tracings help the physician to a better understanding of the physiologic and pathologic changes in the heart. Interpretations of tracings often confirm or throw doubt on our clinical opinions and thus assist in estimating myocardial reserve.² The use of these methods we be-

lieve will continue to increase our capacity of determining myocardial efficiency which is of fundamental importance in cardiology.

Endocarditis. Small³ of Philadelphia announces the discovery of specific organism of rheumatic fever, the streptococcus cardioarthridis, which, as is inferred by the name, should be of utmost importance in rheumatic heart disease. Confirmation of the preliminary announcement is looked forward to with unusual interest.

Many articles have been offered on subacute bacterial endocarditis, but nothing new presented of therapeutic value.⁴

Myocardial Disease. Janney Smith⁵ reports interesting work on the effect of deep X-ray therapy on the heart muscles. Electrocardiographs tracings suggest definite deteriorating effect on the heart which is supported by pathologic evidence. If further study confirms these findings it should be of great importance in the treatment of malignancy and other conditions in the chest or mediastinum requiring deep therapy. Definite effort to protect the heart from the rays will be necessary.

Much interest is manifest in Angina Pectoris and coronary thrombosis. The trend of opinion concerning cause of pain in Angina Pectoris leads toward myocardial theory with ischemia and coronary sclerosis as the fundamental factor.⁶

Herrick reports interesting observations on the combination of Angina Pectoris and severe anemia. This supplements earlier studies on severe pernicious anemia and secondary anemia with typical angina syndrome. This combination tends to favor the coronary and myocardial ischemic therapy as opposed to the aortic theory.⁷ Coronary thrombosis with occlusion is being more and more crystalized into a well understood disease entity and more frequently recognized than ever before. Differentiation between Angina Pectoris and coronary thrombosis has been clearly defined by various authors. Angina Pectoris symptoms are recognized as a result of effort, emotional disturbances with evidence of more or less myocardial inefficiency and relieved by rest and nitroglycerine. Coronary thrombosis is recognized by similar pain, both as to location and character, but not relieved by rest and often lasting hours and even days and often not relieved by the ordinary dose of morphine. Pulse rate is increased and often irregular and blood pressure is apt to be found decreased. In

a few hours pericardial friction rub may be detected in the third and fourth interspace near the sternum, slight rise of temperature and a moderate leucocytosis and congestion of the lungs, depending on the extent of the myocardial injury. This group of symptoms justifies the diagnosis of thrombosis. Electrocardiograph tracings in coronary thrombosis frequently show bundle branch block which is of diagnostic and prognostic value.⁸

Gallop rhythm⁹ is emphasized as a bad prognostic omen and as warning for more careful management. Pulsus alternans is the irregularity most frequently associated with gallop rhythm and should be considered as the two most positive signs of failing heart. Prognosis is especially bad when accompanied by hypertension.

Therapeutics: Continued interest in the use of quinidin sulphate has increased its scope of cardiac therapy. Among other things it diminishes conductivity of the heart muscle and conduction system itself and represses the recovery after contraction, thus lessening the refractory period. These qualities are of the greatest therapeutic importance.¹⁰ The drug is of recognized value in certain cases of auricular fibrillation both of the persistent and transient type, premature beats, paroxysmal tachycardia and simple tachycardia.

Salyrgan is a new diuretic recommended for intravenous use in anasarca of cardiac origin. It is contraindicated in cases of nephritis.

Brown and Coffey of San Francisco continue research work and surgery for relief of Angina Pectoris. In practically all their later cases they have limited their surgery to "removal of the left superior cardiac nerve of vagus being cut and a section taken out if possible. The latter is done to insure against any of the collaterals of the vagus having been left."¹¹ Their results have been satisfactory, but they have used careful discrimination in selection of cases. In most cases the sympathectomy is performed under local anesthesia. Their selection of cases and careful surgical technique is no doubt a big factor in obtaining such good results.

The results of periarterial sympathectomy suggest that its value is rather limited.

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GASTRO-ENTEROLOGY

Elmer L. Eggleston

While the year of 1927 has witnessed no epoch-making discoveries relative to the function or pathology of the gastro-intestinal tract, nevertheless, the advancement noted in the diagnosis and treatment of such disorders has kept pace with the progress of general medicine. Standardization of diagnostic methods in use in hospitals, with an improvement in their equipment, has been fostered by the American Medical Association, also by the College of Surgeons. This has meant much to the profession in permitting men in the smaller cities to have the same opportunities as men in the larger centers. It is a work which should be carried on with the hearty co-operation of those interested locally.

The diagnosis of gastro-intestinal disorders has reached a high state of efficiency. The use of the esophagoscope both in diagnosis and treatment has meant much in the diagnosis and treatment of disorders of the esophagus. The work of the radiologist is becoming so imperative that practically all hospitals have installed excellent equipment along this line, and the training of technicians has gone ahead very rapidly. The value of this procedure is so great that a proper study of a gastro-intestinal case has not been made where this has been omitted.

Along the lines of treatment of gastroduodenal disturbances, a more rational view has been taken by both surgeon and internist. They are no longer each one working along his own line, but are co-operating much to the advantage of the patient and to the credit of the profession. The latest surgical expression (Balfour: *Minnesota Medicine*, November, 1927), relative to gastro-intestinal conditions demanding surgery is as follows:

"The more experience acquired in the surgical treatment of lesions of the stomach, the greater the conviction that progress in the management of peptic ulcer will depend on a more intelligent selection of cases for operation and a better appreciation of the general principles of those operations which experience has shown to be worthy of application. I believe that most of the failures of surgical measures to cure peptic ulcer permanently can be attributed to failure in one or both of these respects."

And moreover, more care in the selection of surgical methods is constantly being urged. The same author continues:

"In both malignant and benign lesions of the stomach and duodenum it is a mistake to imply that any single type of operation will always deal adequately with the lesion."

The selection of the operative procedure of gastro-enterostomy for the relief of an unstenosed duodenal ulcer is not now the operation of choice. If done, it must be combined with a resection of the ulcer or a duodenectomy or a plastic operation on the duodenum, but more and more both surgeon and internist recognize the unstenosed cases as being definite problems for the internist and excellent results from this type of treatment are being reported.

More radical surgical measures, such as gastrectomy in the treatment of duodenal ulcer, have not met with the approval of the profession generally. Since the operation is followed by a complete achylia which is the desire of those championing the procedure, and since it is found that an achlorhydria is very apt to be followed by anemia or by a diarrhea due to colitis incident to the achlorhydria, a strong opposition has developed and it is quite probable that the procedure will not become at all popular.

In the medical treatment of peptic ulcer, certain modifications of the Sippy method are being advocated. The alkalis are not found to be of value in the amounts originally advised by the author of the method. Hypersecretion, symptoms of alkalosis, and renal disturbances, are being reported more frequently where such treatment is in vogue, whereas a reduction of the alkali to one-fourth or one-eighth accomplishes all that is apparently necessary in the way of neutralization, and under this regime the patient promptly loses the symptoms of toxemia due to the excess of alkalis.

The regulation of gastric acidity by means of regurgitation of the duodenal contents has received further study and under normal conditions, in the absence of pyloric stenosis, there is no doubt but that an optimum gastric acidity is produced which lessens the necessity for the use of alkalis except in very small quantities.

The pathology of the duodenum other than ulcer has received considerable study, especially duodenitis due to infections that are probably blood borne. The supposition is that this may be a factor in the formation of duodenal ulcer or duodenal ileus. The latter, when due to obstructive lesions,

malignancy, or pressure from growths outside the duodenum, or adhesions, or to mesenteric drag, as in cases of visceroptosis, respond well to operative treatment, duodeno-jejunostomy being the operation of choice. The cases more functional in character do not respond well to surgery and are medical problems. In the visceroptotic type the value of physical and postural treatment is evident.

Along diagnostic lines of liver and gallbladder disorders, the functional tests are still attracting much attention, not that any test so far suggested gives an estimate of the complete function of the liver, but it is probably an indication of some specific function and is very definitely of value. Cholecystography is of great value in determining gallbladder dysfunction and pathology and is the most valuable diagnostic procedure perfected in recent years. There is still some question as to the administration of the dye, as to whether it should be intravenous or oral. Certainly the results are more dependable following the intravenous method, but the procedure may require more skill and equipment than is furnished by the small hospital.

Along the lines of intestinal diagnosis and therapy there has been definite advancement. There has been previously a notable lack of information relative to the intestinal tract which is being corrected by more careful histories, of the almost routine use of X-ray, and careful rectal and lower colon examinations by means of the sigmoidoscope. Along this line it might be mentioned that the work of Bargen, Logan and Buie still stands out as being exceptional in the diagnosis of ulcerative colitis. The so-called nonspecific type of ulcerative colitis they believe to be due to a diplococcus and their treatment is largely the use of a vaccine or filtrate. The frequency in which they make this diagnosis and the remarkable results which they report are exciting considerable interest, and while the profession has not entirely accepted their views, their statements appear very convincing. More rational treatment of rectal disturbances, ulcers, fissures, hemorrhoids, cryptitis, etc., have been provided by the proctologists and they have done much toward relieving one cause of chronic intestinal stasis. There has been a still greater departure from the use of cathartics in intestinal stasis and such simple measures as regulation of diet, the use of mineral oil, a bulky diet as provided by bran and green vegetables and the use of such measures

as kaolin and psyllium seed, has accomplished much in the relief of this unsatisfactory condition.

NEUROLOGY

C. D. Camp, M. D.

The year 1927 has seen no outstanding publications in the field of neurology. However, one makes this statement with considerable reserve. It is entirely possible that in some medical journal or book an account of experiences and observations have been published that future generations will herald as a great discovery. The original publications of Mendel and Freud for instance, attracted no attention at the time. Those who think that they have published important discoveries should not be discouraged through lack of immediate appreciation.

In psychology the year has been chiefly notable through the number of papers and books dealing with "Behaviorism" and "Individual Psychology". There seems to be a tendency to neglect the older tenets of psychology founded on philosophic principles and to accept the more objective study. Even psycho-analysis has been pushed into the background.

In neurological anatomy the most important works have dealt with the anatomy of the basal ganglia and mid brain for instance, the paper by Freeman on the arrangement of the primary afferent centers in the brain stem (*Jour. of Nervous and Mental Diseases*, January), another by L. O. Morgan (*Arch. of Neur. and Psych.*), and the book by Foix and Nicolesco on the mesencephalon and sub-thelamic region. The anatomy of this region is extremely intricate and something still remains to be done. In the physiologic field also the main focus of interest has been on the brain stem, the paper by F. T. Rogers in the *American Journal of Physiology* being perhaps the most notable contribution.

In the field of neuropathology and clinical neurology a great deal of attention has been devoted to encephalitis, especially the chronic form characterized by the Parkinson syndrome or by various types of mental disturbances, anomalies in breathing, et cetera. The etiology of epidemic encephalitis cannot be considered as settled. Hand and Reilly published a rather interesting suggestion that Raynaud's disease in children might be due to hereditary lues. In these cases the diagnosis of lues was not apparent in the patient, but was made by blood examinations in the parents. Munck (*Jr. of Nervous and Mental Diseases*) on the basis of a number of medico-

legal examinations, showed that spontaneous subarachnoid hemorrhage might cause sudden death. There have been a considerable number of publications on multiple sclerosis without, however, adding very much to our knowledge either of the etiology or symptomatology of this important disease. Kolb has published his views concerning drug addiction on the basis of the study of several thousand cases. He believes that true drug addiction always occurs in patients who have a pathologic nervous constitution. People who are perfectly normal run little danger of becoming addicts. It is an interesting observation that drug addiction may be periodic, similar to periodic drinking. The articles by Lapinski (*Arch. f. Psych.* 82, 43), on the mechanism and location of reflex pain arising from the viscera are of interest not only to the neurologist, but also to the surgeon.

Along the lines of theapeutics the chief developments seem to be in the use of serums and in endocrine therapy, but the published reports of cures are not altogether convincing. In the *Journal of Nervous and Mental Diseases*, February, Freeman publishes an article, the vaccine treatment for encephalitis, but with an absence of control cases. The use of serums for anterior poliomyelitis has also attracted considerable attention, but they can hardly be said to rest upon a scientific basis at the present time. Perhaps the best suggestion that is made in this connection is the use of sera obtained from a recently cured case of poliomyelitis. In the treatment of migraine Tigges (*Deut. med. Wochenschr.*), advises nasal application of cocaine and adrenalin. Bigland (*British Medical Journal*) has tried giving calcium lactate in thirty grain doses, but the results were not encouraging. Hahn and Stein (*Zeit. f. Nervenheilk.*) suggests the use of intravenous injection of papaverin at the onset of an attack. The malaria treatment of paresis continues to attract considerable attention. A good review of the subject by Ferarro and Fong is found in the *Journal of Nervous and Mental Diseases*. Some modification of this method has also been tried as for instance, the substitution of an infection by sodoku. Most of the reports have been rather enthusiastic regarding their results, but it is obvious that a considerable period of time must elapse before anyone can say that a cure has been obtained.

Attention might be called to the death of Bianchi, the celebrated Italian neuro-

pathologist, who died in Naples; also the death of Foix of Paris. In America we regret the death of Dr. T. W. Salmon of New York and of Dr. S. G. Webber, who was one of the founders of the American Neurological Association.

COMMENTS ON THE PROGRESS OF DERMATOLOGY
IN 1927

R. A. C. Wollenberg, M. D.

Contributions in this branch of medicine have been many and interesting, and the fact that new names are regularly appearing as authors in a field in which important clinical, pathological, and therapeutic knowledge is rapidly growing, attests the interest that our younger and enthusiastic colleagues find in this specialty. There are none to deny that Ehrlich's great discovery re-awakened an interest in syphilis in particular and in dermatology as a whole which has not yet been spent, but, on the contrary, is still drawing many of the keenest medical minds into the pathways he blazed.

The one great result achieved by intravenous medication has been the elimination of self-drugging by sufferers from syphilis, and never before have these patients been under such medical control as they are today. In consequence, the cure of syphilis is still an outstanding challenge to the medical profession. Certainly, the cure of our patients is not the least of our functions.

The controversy as to the relative merits of arsphenamine and neoarsphenamine still continues. Safety and simplicity of administration are, no doubt, the great advantages of the latter, although its therapeutic efficiency, dose for dose, is less. Notwithstanding, serious symptoms still occasionally follow its use, and a number of diluents other than water have been used in order to avoid such annoying and disappointing phenomena. Of these, glucose gives the most promise.

Of the newer arsenicals, stovarsol, called to our attention by French investigators, has the advantage that it can be given by mouth. Clinical studies in this country prove it to be useful in controlling the clinical manifestations of syphilis and to show a serological improvement. It may become very useful as a prophylactic. It is a pentavalent arsenic, containing 27.2 per cent of the metal, higher than neoarsphenamine. Its efficacy is comparable to the latter, and its tolerance is higher.

Fortunately, deaths from use of arsenicals are more rare, but a recent one from purpura hemorrhagica following sulpharsphenamine was found in the literature.

In this connection, it may be well to mention that this year has produced further facts to substantiate the value of sodium thiosulphate in arsenic poisoning, especially when administered early. Treatment with arsenic should be suspended and sodium thiosulphate should be administered intravenously at the first sign of the eruption. By mouth, it acts as a violent purgative, and large doses are not tolerated.

Bismuth has only recently been added to the antiluetic group of drugs, and, as an insoluble compound suspended in oil, has come to be popularly used as an intramuscular injection. It is absorbed very slowly, may be indefinitely deposited, and, with our increasing knowledge of oil tumors, regarded as precancerous, it may be well to speculate on the remote results of the countless number of such treatments being given today. Oil tumors may not appear until many years after injection, and they have been shown to be even permanently disabling. Whether or not the indiscriminate use of the insolubles is inviting a dangerous reaction, or whether, in the words of a prominent dermatologist, "the needle may be more dangerous than the disease", only the future will disclose. However, the value of bismuth in syphilis is undisputed, and, with the purpose of providing a compound which can be injected intramuscularly without causing injury to the tissues and which will not form a deposit at the site of injection, a soluble bismuth compound of thioglycollic acid has been prepared and studied in experimental and clinical syphilis. It apparently produces more rapid improvement in lesions than the insoluble bismuth compounds.

Attention is drawn again to the possible danger of bismuth poisoning. It is eliminated in the urine, feces, bile, and saliva. If elimination be prevented or absorption be too rapid, intoxication may occur with symptoms of stomatitis, gastro-enteritis, circulatory disturbances, fever, nephritis, and changes in the central nervous system.

Reports on the malaria treatment of central nervous system syphilis show results which warrant the use of this therapy in cases which show no further betterment by the other recognized methods. In Europe, especially, malaria treatment is now well established.

In the serology of syphilis, the Kahn precipitation test has now become the official test in several state laboratories. Elsewhere it remains an excellent check on the Wassermann reaction, and, to obtain

the greatest possible accuracy, it is best to employ both.

Great advance has been made in the treatment of that persistent and intractable disease, lupus erythematosus. Gold and sodium thiosulphate has been used with results so striking that it appears to have almost a specific effect. In a large number of patients treated during the last year, the majority have improved and many appear cured. Also, some cases of lupus vulgaris have shown improvement.

In the treatment of local and general infections and other diseases mercurochrome—220 continues to hold attention in the dermatological field. Its intravenous use has met with success in the following diseases reported: anthrax, cellulitis, erysipelas, resistant furunculosis and carbuncles, madura foot, and some cases of psoriasis. Locally applied, quick and excellent results have been obtained by a 2 per cent solution of gentian violet in impetigo contagiosa and other superficial pus infections.

The literature on fungus diseases of the skin reveals the increasing importance of this subject. Unfortunately, there is a great confusion of names for the many species of fungi affecting the skin, and whether certain moulds are to be called epidermophytons or trichophytons, is not yet settled. Noteworthy laboratory studies on the fungi have been made in this country. A new type of mouth infection by the monilia pinoyi, a yeast, has been reported. It is closely related to thrush. There were also reported two new species of mould in maduromycosis. Infection by fungi appears to be very common throughout the world, many cases are very resistant to treatment, and there is marked tendency to recurrence. The dyes, salicylic acid, mercury, and X-ray in the hairy parts remain our chief therapeutic armament.

That such hackneyed subjects as smallpox and vaccination should continue to engage the attention of writers should surprise no one. Our recent experience with outbreaks of malignant variola in various states suggests one to paraphrase the old maxim, "Eternal vigilance is the price of liberty" to "Infernal pestilence is the price of negligence."

It is stated that the Minnesota law requiring vaccinations was repealed in 1903 with the result that a large part of the population is now unprotected against smallpox. From 1913 to 1923, this state had over 35,000 cases with 108 deaths. Of these cases 94.1 per cent had never been vaccinated. Of those vaccinated over seven

years before, there were 4.2 per cent. Of those vaccinated within seven years, there were 1.7 per cent. In this group none died. The lesson is obvious to any one with an open mind. Smallpox, a loathsome pest, can be stamped out by vaccinating every seven years, and there is no better treatment than prevention.

The year 1927 marks the passing of Dr. Milton Bixler Hartzell, a master dermatologist, a student of Louis A. Duhring, whom he followed as Professor of Dermatology at the University of Pennsylvania. Dermatology has recently sustained further great loss in the death of Dr. T. Casper Gilchrist, for many years associated with Johns Hopkins university.

NOTES ON THE PROGRESS OF ROENTGENOLOGY AND RADIATION THERAPY DURING THE YEAR 1927

Preston M. Hickey, A. B., M. D.

The teaching methods of roentgenology to under-graduate students have shown notable progress. A number of anatomic laboratories have installed X-ray machines for the use of students in studying anatomic material. The film and fluoroscope are systematically employed in giving the medical student a different viewpoint in the study of anatomic structure and also in demonstrating the function of various organs. The use of the projection apparatus by which X-ray films can be directly thrown upon the screen permits of the demonstration of these films in all their original detail to large groups of students.

The use of the tetraiodide of phenolphthalein in the study of the physiology of the gall-bladder and in the demonstration of its disturbed function has increased in popularity. There has been a growing tendency to the employment of tetraiodide by the oral method in routine cases, reserving the intravenous introduction of the dye for an increasingly small number of selected cases. There is a tendency to substitute for the capsules of the dye a palatable solution which can be administered in one dose which marks a further step in the popularization of this useful method of diagnosis.

The use of iodized oil during the last year has also come into more general use. The technic for the introduction of the oil into the lower air passages has been simplified and the positive demonstration of bronchiectasis and lung abscesses is permitting of a more positive diagnosis of these pathologic processes. In the upper air passages the filling of the para-nasal sinuses with the iodized oil is opening up an additional means of study of their

anatomy and pathology. The non-filling of the sinuses because of pathologic exudate or swollen ostia, or the prolonged retention of the oil after introduction constitute the basis for conclusions as to the presence of pathology. The work in this field is arousing considerable interest and the indications are that it will be a very promising field for future research.

The use of iodized oil in the demonstration of pathology of the uterus and the uteri adnexa is attracting the attention of many clinicians and it bids fair to assume a prominent place in the diagnosis of strictures and patency of the Fallopian tubes. Several articles, however, have appeared showing the dangers of its indeterminate use and showing the necessity of a careful selection of cases where it is to be employed. The contra indications are against its use in tubes which have an active or latent infection. The use of the iodized oil in the diagnosis of early pregnancy has been shown to be attended with the danger of producing abortion. Some of the previous writers on this subject had claimed that the introduction of the iodized oil into the uterine cavity in early pregnancy was not attended with the possibility of producing abortion. From the experience of more extended observation it has been found that the danger of abortion in these cases is about 20 per cent, a proportion which would prohibit its routine employment.

A very notable improvement during the past year in the X-ray diagnosis of pulmonary conditions has been made possible by the work at the Phipps Institute in Philadelphia. Dr. McPhedran of that institute has demonstrated that it is possible to obtain exposures of the lung fields with very short exposures made during the same phase of the cardiac cycle. This has made it possible to demonstrate certainty by removing the haziness of films of this area due to the blurring from the cardiac impact. The diagnosis of pulmonary tuberculosis in children which has always been a most difficult matter seems now to be making headway with promise of an ultimate solution.

The experiments with the new cathode tube are being actively conducted, one of the results which bids fair to be of practical importance is the discovery that in certain foods the vitamin contents can be strikingly increased. Many of the observations of the change in the physical attributes of certain chemical compounds under the action of the cathode stream lead one to prophesy that the new tube will

be extensively employed in experimental chemistry. It is noteworthy that Dr. Coolidge has been able to increase the voltage from the 200,000 volts which he employed in his early type of tube to 750,000 volts, increasing the possibility of greater chemical changes.

The Bureau of Standards at Washington has installed a department for the study of the problem of standardization of protective materials such as lead glass, opaque gloves and aprons used in Roentgenologic laboratory. The Bureau of Standards is also occupying itself with the study of the standardization of the output of X-Ray machines. Possibly the most important advance in Roentgen Therapy during the past year has been the demonstration of the close similarity of the different units employed in Germany and America. Previous to these recent observations it has been thought that the standard unit employed in Germany varied from the standard unit employed in America, first introduced by Dr. Duane of Harvard university. Now that these two units have proven to be without practical difference, it will probably result that the next International Congress, meeting in July 1928 in Stockholm, Sweden will adopt an International Unit. If this unit is adopted, as now seems probably, it will do much to standardize the Therapy dose in all parts of the world and will allow a more exact comparison of different methods of Radiation treatment.

The so-called saturation method has been carefully studied both experimentally and clinically and is apparently gaining in popularity.

While the year 1927 has not been productive of any startling discoveries in Radiation, still there has been a gradual accumulation of authoritative studies along certain lines which is tending to place Therapy on a much sounder basis.

PROGRESS IN RADIOLOGY
J. H. Dempster, M. D., Detroit

Radiology or the X-ray in its broadest aspect is still a very young specialty born as it was 32 years ago. The progress of the science has been along two somewhat varying directions, namely mechanical and clinical. To mention the high spots of mechanical development, we have the discovery of the X-rays in the fall of 1895 and the discovery of their fluorescent effect on cardboard surface coated over with platinum-barium-cyanide salt. Then came the interrupterless transformer. This was followed in 1914 by one of the greatest in-

ventions of the century so far, namely the hot cathode X-ray tube known as the Coolidge tube, by W. D. Coolidge. It supplanted the original gas tubes. Since this time we have had some modifications and refinements of this tube. Later came the Potter modification of the Bucky diaphragm which eliminated in a large measure the scattered radiation, the bane of the Radiologist especially in making examinations of the thicker portions of the body. A marked advance in development technique followed the discarding of glass plates and the introduction of the duplitized film. This coupled with double screen technique, added greatly to the speed with which exposures could be made which was so necessary to satisfactory diagnostic plates of mobile parts such as the thoracic and abdominal viscera. Mention must also be made of the higher voltage machines in treatment with concomitant development of protective measures. X-ray apparatus is still very bulky, demanding considerable floor space. This is true of all but portable and dental units. The refinements in apparatus have been largely the work of the manufacturer and engineer, the Potter-Bucky diaphragm excepted.

The contribution of the clinician has been equally important in the development of Radiology. Cannon very soon after the discovery of the X-rays saw the advantage of the opaque Bismuth salts in studying the hollow viscera. The results of his studies are embodied in his well known book, *The Mechanical Factors of Digestion*. Soon after this Hemmeter employed the same method, namely the opaque insoluble salt of Barium, which has revolutionized abdominal diagnosis. Then came pneumoperitoneum, a method which by the inflation of the peritoneum by means of oxygen, examination of the solid abdominal and pelvic viscera was facilitated. This later method as a routine has largely fallen into disuse. Modification of it however, has been employed in the X-ray diagnosis of brain tumor. A portion of the cerebrospinal fluid is drawn off and replaced by the injection of sterile air. By this method we are to obtain radiographs or ventriculograms of the lobes of the brain. Air or suitable gas in proximity to the various viscera has the effect of bringing the parts into relief. This principle has made the radiographic examination of the heart and lungs one of the most successful fields for X-ray study.

In 1923, Graham of St. Louis devised a method for the visualization of the gall-

bladder which up to that time had proved the most unsatisfactory portion of the alimentary tract to yield to radiographic study. Rehfuess declares the Graham test to be without question one of the greatest discoveries of this contemporaneous era of medicine. As a method for the study of gallbladder function it has come to stay. Early in the use of the method patients were found to suffer from toxic symptoms incident to the administration of the dye. This led to further experiment and study, partly the work of the year 1927, and the conclusion has been reached that the ordinary human dose of sodium tetraiodophthalein as used in the Graham test is well under the toxic limit. Particularly is this true if administered by the oral method.

The past year has seen the development of a diagnostic method, particularly for intra-uterine conditions, by means of lipiodol. This substance injected into the cavity of the uterus and tubes is opaque to the X-rays. Radiographic examination of the injected uterus often enables one to diagnose intra-uterine or submucous fibroids or other gross pathology, or the patency of the tubes.

For some time past lipiodol has been used as contrast medium in connection with the bronchial tubes as well as the accessory or other sinuses.

Radiologists are constantly active in the devising of diagnostic methods and technique and each year sees improvements that are at least important to those who confine their attention to this field.

FRACTURES

A. D. Laferte, M. D.

The year of 1927 has brought marked innovations in the treatment of fractures. There has however, been some convincing evidence that various of the present methods might be used less often and then by those peculiarly apt in their use and in institutions specially equipped.

The Committee on Fractures of the American College of Surgeons has done valuable work in investigating methods and results, and in some cases of outlining principles of treatment.

In fracture of the clavicle it is almost never necessary to operate. A very efficient device is the "T" splint which when properly applied elevates, and pulls the shoulder back, immobilizing the fragments and permitting the patient to be about.

In fracture of the humerus no one splint can be used in all cases, however, either the hinged Thomas or the Jones Humerus

Traction splints will care for most fractures of this bone above the condyles. The method of application of the Thomas splint depending upon the location of the fracture and the amount of rotation of the fragments. In fractures at the elbow joint, with exception of the elocranar, the position in acute flexion is standard.

There have been many unsatisfactory results in Colles' fractures. In many instances this has been shown to be due to insufficient pronation of the distal fragment in reduction, and to failure to approximate the lower end of the ulna to the radial fragments in splinting.

Most fractures of the radius and ulna can be handled without operation. The exception being that of both bones of the forearm low down within the pronator quadratus muscle. These latter are often impossible of closed reduction and can generally be held by merely opening the forearm and approximately the fragments without any internal fixation material.

Fractures of the neck of the femur may be well treated by the Whitman method. The writer prefers to impact this fracture as practiced by Cotton and treat it in the Whitman position. The greatest error in handling these cases is in allowing too early weight bearing. Fractures of the inner half the neck should bear no weight for nine months while those of the outer half should bear no weight for six months.

Most fractures of the tibia and fibula can be treated without operation. The exception being those of both bones in the lower third when the fracture of the tibia is oblique. The sliding bone graft is here the method of choice.

Various means have been tried in treating fractures of the os-calcis, the closed method prevailing. However, when the fracture extends into the sub-astragalar joint a good result will seldom be obtained unless a fusion of this joint be done. Tenotomy of the tendo-Achilles is by no means indicated in all cases.

Fractures of the spine have brought forth a great deal of literature and the evidence seems to point to the fact that unless the cord be impinged upon, operation is of no benefit. The best treatment seems to be hyperextension on the Bradford Frame for from four to eight weeks, this to be followed by a Taylor brace or plaster support for from six months to a year following.

Most deaths in this fracture are caused by cystitis and nephritis following catheterization. It may be definitely stated that

in this class of case where there is urinary retention catheterization is contra-indicated. If left alone an automatic bladder will be established.

During the year of 1927 there have been many discussions concerning the various procedures in the open reduction of fractures. Sherman of Pittsburgh, who is an advocate of plates, states that there are but 12 hospitals in the United States equipped to handle the operation of these cases. The writer believes that this is probably exaggerated, but is also of the opinion that the various metallic plates might well be discarded entirely. We have found in all cases operated that it was possible to obtain an end to end reduction by merely approximating the fragments, closing the wound and applying a cast. In a few instances it was necessary to dove-tail or groove the ends in order to obtain a locking. The use of the plate is objectionable as it delays bone union and necessitates a second operation for its removal. Also in doing open reductions the danger of infection must always be kept in mind and if infection takes place in the plated case, it affects not only the bone ends but also the entire cortical substance to the screw holes distal to the fracture line.

In closing it may be well to state that in operating for the reduction of fractures there must be no hand contact with the wound.

PROCTOLOGIC PROGRESS IN 1927

L. J. Hirschman, M. D.

The specialty of proctology has continued to make great strides during the year just closed. Greater interest than ever before is being manifested in the patient suffering from diseases of the anus, rectum and colon.

Post-graduate schools report a large increase in the number of practitioners desiring special instruction in proctology. Many surgeons are abandoning general surgery in order to limit themselves to this highly specialized field.

An additional number of medical colleges and universities have provided for special teaching in proctology by proctologists. The same is true of the hospitals. The number of attending proctologists is increasing and departments of proctology inside of the hospitals as well as in out-patient departments is increasing.

The meeting of the American Proctologic society in Philadelphia in May, 1927 had the largest attendance ever recorded.

The session of the section on gastro-enterology and proctology at the Washington meeting of the American Medical association, was crowded to the doors. For the first time in its history, at the Detroit Surgical Congress of the American College of Surgeons, proctologic clinics were given every day in special proctologic departments of several hospitals. In some instances these clinics were attended by a larger number of surgeons than could be comfortably accommodated.

All of the foregoing indicates a growing appreciation on the part of the profession of the real need for the same special attention to patients suffering from diseases of the lower bowel as to those suffering from diseases of other organs.

During the past year there has been a more general employment of caudal, sacral and spinal anesthesia in the surgical treatment of diseases of the anus, rectum and colon.

Patients themselves are not only insisting upon the treatment of their proctologists but are requesting the use of one of these non-sleeping methods of anesthesia.

The public is beginning to realize that certain non-surgical methods of treatment are employed when indicated by ethical proctologists. They are learning it is safer to be treated by men who are morally responsible to their profession, to the law, and to their own consciences, than to trust their fate to the irregular, blatant and irresponsible advertising ambulant proctologist.

The type of practitioners who are limiting themselves to proctology in their various communities, represents a high average of professional integrity. These men as a rule, merit the respect and confidence of their professional co-workers and have rescued the treatment of rectal diseases from the dangerous channels into which it was drifting in the past.

Proctology is grateful to the general profession for their co-operation and promises a continuance of the earnest, ethical, scientific and conscientious pursuit of the specialty and an increasing endeavor, by its acts, and the results of proctologic treatment by proctologists, to continue to merit the approbation, respect, support and esteem of the profession at large.

UROLOGY

H. W. Plaggemeyer, M. D.

In the year 1900, the International Society of Chemists sat in solemn conclave, and, after lengthy and erudite discussion, accompanied by much wagging of heads,

sagely declared that chemistry had reached its bounds, and that nothing more remained to be discovered in this realm of investigation. Since that time there have been more and farther reaching advances made in that one domain, than throughout the previous 300 years put together.

Ten years ago it was commonly remarked that urology had reached its limit. Nothing was left to write about. Strange to relate, it has more than kept pace with its sister specialties, not only in new discoveries, but in the application of newly discovered principles in the applied sciences. The investigations of Hinman, and of Richards and Plant, are to be regarded as of particular significance in the realm of physiological urology, while modifications in operative technique, throughout the field, have not been without interest.

The past year, has witnessed a marked advance in the field of Electrotherapeutics, and will, undoubtedly, be looked upon in retrospect, as the opening phase of a new era; for, while this branch has been for sometime diligently applied, it is really in 1927 that it has come definitely into its own. Amongst the many applications of diathermy, probably the most interesting result of the year's clinical work is the observation that its use per rectum, in cases of gonococcal posterior urethritis seems to preclude the hazard of acute or chronic prostatitis. If, in its last analysis, this postulate stands completely proven, we have bridged a gap, hitherto thought of as impossible, and have been able to give to humanity, a distinct boon in the control of that most intractable aftermath of Neisserian infection. It needs but small exercise of the imagination to fancy some future modification of this method as a powerful weapon in the acute stage. The question as to whether this procedure has a tendency to kill spermatazoa, and to inhibit spermatogenesis is a present battle ground for two groups of physiologists and pathologists. The future alone will tell the story.

The number of new instruments and mechanical appliances is legion. The outstanding one is the Colling's Electrotome for use in the treatment of the poor maltreated fibrous contracture, or so-called median bar of the vesical neck. The other indication for its use would be, obviously, in conditions of fibrous scar after prostatectomy, particularly when done by the perineal route, and in advanced cases of prostatic carcinoma which have risen to

the dignity of median bar formation. The instrument as devised by Dr. Collings of New York, and technically perfected by Wappler, meets a long felt want, superseding, as it does, the highly unsatisfactory procedure known as the punch operation. The process is not a cauterization, but an efficient cutting under observation at every second by the operator. The instrument behind the knife is a generator of high frequency electric current of such character that, when used in conjunction with suitably designed applicators, it effects free cutting of human tissues even in a water medium. Again it is to be noted that this instrument cuts, and does not cauterize; hence there is no thick slough, and consequently no secondary hemorrhage, which was the bane of our lives under the regime of the punch operation. Primary bleeding is practically nil, and the procedure itself is a really minor one, giving relief to major lesions, apparently without grave complications. It need scarce be mentioned that this method is never employed in cases of true adenomatous hypertrophy.

Especially worthy of notice is Lowsley's new electrode for application to bladder tumors, under direct vision. This is a permanent instrument, and will undoubtedly do away with the previous expensive nuisances with which we have so long struggled. His other product of the year, is the longitudinal rongeur for picking foreign bodies from the bladder. This instrument has the peculiar advantage over its predecessors in that it enables the operator to see completely around the object to be attacked.

The new baby scope of Wappler will have immediate popular acceptance over the Helmholtz instrument, in that it is only size 11 and will freely take *two* No. 4 ureteral catheters.

In the operative field, particular attention has been given to vas ligation in prostatectomy as a preventive against epididymitis. The incidence of epididymitis without vas ligation is 20 per cent, a dangerous factor in the aged. According to Goldstein this procedure should be done in all cases, and preferably before the operation. *Ligation has no effect on the sexual powers.*

With regard to the removal of the prostate itself, the practical consideration is not the mere extirpation of the gland, but the problem of renal decompression which *should* precede it. In the perineal operation this is done by fractional catheteriza-

tion, with a view to a re-establishment of an impaired renal circulation. In the past 10 years, the proponents of the suprapubic route have held rather closely to the two stage operation, using open cystotomy as the first or decompression stage, and allowing the bladder to become infected, thereby establishing its own immunity during this trying interval before actual removal of the gland.

Lower of Cleveland has long advocated the one-stage operation, and in this past year Thomas of Philadelphia has come out openly for it, both claiming that the catheter may just as well be employed here as in the perineal route. Their arguments, carefully reviewed, seem to carry conviction, and the writer feels confident that the year 1927 has seen the pendulum slowly and surely swing away from the two-stage, toward a one-stage operation preceded by inlying catheter and fractional reduction. Naturally cases of marked cystitis, or of tumor or stone with large blood clots have to be handled on the individual merits of the case, but we feel sure in stating that the general tendency is, except in this minor percentage of cases, toward the one-stage operation, after having satisfied ourselves that the previously impaired renal circulation has been readjusted.

In the field of chemo-therapeutics, mercurochrome has just about held its own, the present query being whether it is not of much better value in the head specialties than in the urological tract. Certainly it has proved of no use whatever in the treatment of gonorrhea, though it is only fair to say that its sponsors never claimed this for it.

Hexylresorcinol is still in the clinical experimental stage. However the work during 1927 of Leonard and his associates on surface tension, may lead us on to discoveries of far greater importance than its local application to hexylresorcinol itself.

RESUME OF RECENT PROGRESS IN OTOLARYNGOLOGY B. N. Colver, M. D.

In making this review the Archives of Otolaryngology for 1927 have been used as the source. This Journal prints each month an article by some leading man outlining the progress on a given line.

The Functional Examination of Hearing: Deaf Mutism and the Education of the Deaf—(January)—Robert Sonnenschein, Chicago.

A great deal of attention is being paid to the study of the bone conduction, or as it is now often termed, cranial resonance. With bone conduction the sound according to Retjo travels directly to the labyrinthine

fluid. Shortened bone conduction means a pathologic condition of the labyrinth or disease of the nerve or changes in elasticity of the labyrinth fenestra.

The study of the problems of hearing by the audiometer is receiving increasing attention by many otologists. The great diagnostic value of accurate audiographs is that they show a complete picture of the hearing capacity over the whole range of frequencies for both ears.

Fowler sums up the data and value derived from accurate audiographs as follows:

Many ears believed perfect by the patient show marked defects, especially in the frequencies not used for speech.

Many abnormalities of the ears appear to be inherited and no changes may be shown during many years or throughout life. Other members of the same family may have similar abnormalities.

The already developed defects at certain frequencies, although unnoticed by the patient, may warn the examiner of impending deafness. Sufficient time has not yet elapsed for us to interpret these graphs diagnostically.

Return to normal or near normal is shown with great precision.

Failure to return to normal is most important to note, and treatment may be undertaken which otherwise would not have been deemed reasonable.

Malingering is easily detected because no one can repeatedly sense correctly a given intensity of sound.

To diagnose total deafness in one ear, it is possible to construct as a guide binaural graphs of known instances of nonaural total deafness, and compare with such guiding graphs the curves obtained from suspected totally deaf ears.

When all the data are considered, it is apparent that even normal ears do not show a straight normal line, but vary up and down, depending on time, place, barometer fatigue and noises.

Anatomy and Physiology of the Ear—(February)—Philip E. Meltzer, Boston.

Gross anatomy has not attracted many investigators during the past year. Considerable research, however, has been done on the finer structures and individual cells. It has been indicated that the greatest functional demand is made on the basal turn to the cochlea. There is therefore a greater physiologic predisposition to acoustic injuries. This is an area primarily affected by disease and by mechanical factors. Senile deafness also doubtless affects a basilar membrane weakened by

faulty metabolism, infectious disease and other diseases.

Peroral Endoscopy—(March)—Louis H. Clerf, Philadelphia.

Esophagoscopy—Cancer—All cases of dysphagia should be examined by esophagoscopy because it is the only sure way. Oblique observation with the patient in the prone position while drinking the opaque material will keep the esophagus filled in its entire extent with a constriction at the point of disease.

Cancer of Lungs—Any case that shows the combination of cough, occasional hemoptysis, apparent good health and the absence of obvious intra-thoracic signs, suggest new growth of the tracheobronchial tree and should be examined with a bronchiscope.

Tumors of the Nose and Throat—(April)—Gordon B. New, Rochester, Minn.

New concludes that the use of cautery and radium in the treatment of malignant tumor of the antrum eliminates death at operation and cures more patients than have been cured previously by an operation.

Tucker reports 15 cases in which laryngo-fissure was performed for early cancer of the larynx. He recommends the operation of early, anterior, intrinsic cancers of the larynx and laryngo-pharynx treated by the use of radium, and concludes that radium is of little value in the treatment of cancer in this region.

Tonsils and Adenoids—(May)—Arthur W. Proetz, St. Louis.

Based on an analysis of the complaints of 1,200 children with the results found three years later, and compared to 1,200 children with similar complaints in whom operation was denied but who were also examined three years later, the following conclusions can be made bearing on the indications for tonsillectomy and adenoidectomy:

1. Mouth breathing is a definite indication for tonsil and adenoid removal.

2. Frequent attacks of sore throat and tonsillitis offer a definite cause for removal of tonsils.

3. Frequent head colds, relieved in 75 per cent of the cases, offers a definite indication for tonsil and adenoid removal.

4. Persistent enlargement of the cervical glands, when no other cause is found, is a just cause for tonsil removal.

5. Malnutrition, when other causes have been eliminated, will be improved somewhat and therefore may be considered an indication.

6. Chronic and recurrent discharging ears are an indication for the operation.

7. Unexplained fevers, in the absence of other indications, may be a just cause for tonsillectomy; but there is no guaranty that they will not recur, unless the fever comes from an obscure tonsil infection.

8. For the prevention of respiratory infections, such as laryngitis, bronchitis and pneumonia, no positive indication exists, as the incidence of these infections was not influenced favorably or unfavorably by operation.

9. The prevention of diphtheria and scarlet fever may be considered an indication, as the incidence of these diseases was slightly less in the group operated on; and when it did occur, the sequelae were less serious when the tonsils were removed.

10. The presence of positive or suspected evidence of the rheumatic syndrome manifestations, rheumatism, chorea and heart disease, is a definite indication for tonsillectomy in view of the lessened incidence of heart disease in the group operated on.

Von Lieberman condemns such practices as slitting, wiping or forcibly washing tonsils. He advises against sewing the tonsil wound shut after tonsillectomy, but does recommend the ligation of all vessels.

Neumann regards the presence and infection of mucous glands left in or about the tonsil fossa as a possible explanation of peritonsillar abscesses occurring after tonsillectomy.

Pilot and Tumpeer have found streptococcus hemolyticus present in 97 per cent of excised tonsils in children.

Daland summarizes his observations on chronic tonsillitis as follows:

1. Latent or chronic infection of the tonsils or sinuses is not uncommon in adults.

2. Scarlet fever, diphtheria, influenza and streptococcal milk in childhood are often the primary causes of latent or chronic tonsillitis diagnosed late in life.

3. Systemic disease, secondary to chronic infection of the tonsils or sinuses, is associated with leucopenia, lymphocytosis and diminished polymorphonuclear cells in about 40 per cent of the cases.

4. The presence in pure culture of the streptococcus hemolyticus or viridans in the bottom of a crypt of a tonsil is diagnostic, the importance of which is increased when injections into animals prove that the streptococci possess pathogenicity and selectivity.

5. The presence of bacteria in sinuses

possesses additional diagnostic value because these regions are normally sterile.

6. Latent or chronic sinusitis is often an unsuspected focus of infection and often co-exists with infected tonsils and teeth.

7. A negative opinion in suspected chronic sinusitis should only be given after repeated examinations.

8. Closed infected ethmoid cells may be the cause of post-operative failure, even when free drainage has been secured.

9. Autogenous vaccines are valuable in asthenia, emaciation, anemia and in the aged.

Chronic Progressive Deafness—(June)—J. K. M. Dickie, Ottawa, Canada.

Otosclerosis—Recent studies show that while there may be an endocrine factor in the production of progressive non-infectious deafness, it is only through the effect of these upon the metabolism whether this is the organic or inorganic chemical processes. This is shown by (1) the hereditary tendency; (2) gonads—preponderance in females and association with puberty, pregnancy and climacteric; (3) thyroid, in a lower metabolic rate; (4) pituitary; (5) parathyroid, by the lowered blood calcium and chronic tetany. It is also shown by other metabolic disturbances such as:

1. Fatigue symptoms.
2. Abnormality in weight.
3. Low blood pressure.
4. Subnormal alveolar CO tension.
5. High undetermined N. in urine.
6. Increase in blood nitrogen.
7. Anemia.

8. Association with other metabolic general diseases.

These processes affecting the petrous bone because of the infantile character of the chondroid bone.

Inner Ear Deafness—Usually associated with an unbalance in the uric acid metabolism or intake shown by a hyperuricemia and association with a gouty diathesis. Therapy is a purin free diet and cinchophen.

Senile Deafness—Usually associated with arterio sclerosis, hypertonus and hypercholesterinemia. An arcus lipoides of the drumhead as well as of the cornea are always found.

Treatment is concentrate on an attempt to lessen the cholesterol content of the blood. Calcium theobromium salicylate 0.5 gr. t.i.d.

Allergy related to Otolaryngology—(November)—W. W. Duke, Kansas City, Mo.

The sensitivity to food proteins in the

serum of normal donors in case of blood transfusion is a definite contra-indication to transfusion in allergic cases.

Non-protein constituents of pollen, etc., can bring about the characteristic response (Greve and Cass).

Temporary sensitivity may be transferred to the normal individual with the blood serum of the sensitized person. Enclosure within a dustless room, while useful as a treatment, aids also in the diagnosis of the presence of irritants in the ordinary air. Continuous desensitization at progressively increasing intervals up to 30 days, gives good results replacing pre-seasonal desensitization (Black).

The Paranasal Cavities — (September) — D. Campbell Smyth, Boston.

Non-suppurative (hyperplastic) sinus disease is present in the majority of intrinsic reflex asthma cases (Mullin). The maxillary sinus is very often affected (Hirsch), whereas the ethmoid has been chiefly considered. The diagnosis is complicated by the fact that transillumination is usually clear. Certain cases where sensitive nasal spots are found are most suggestive of relief by nasal treatment (Coates). Otherwise the sinuses rank as bacterial foci as do teeth and tonsils. Only radical surgery of the affected sinuses averts recurrence of polypi and abates the irritation (Mithoefer). In the maxillary sinus complete removal of the mucoperiosteum is usually advised. Pre-operative knowledge of pathological anatomy, as governing the choice of operation, and a desire to discover all affected sinuses, are making demands on diagnostic measures. This is successfully met in the roentgenologic field by introduction of raidopaque oils. Opaque injection (Fraser), and displacement (suffusion) of Proetz of the various sinuses, coming into common use, producing statistics valuable to prognosis and to the selection of the minimum effective surgical treatment. The corresponding introduction of therapeutic solutions, in inverted positions of the nose, which enter the sinuses upon pressure variations applied to the closed nostril, opens a new field in treatment. Ephedrin, hydrochloride and sulphate 1/2% are most efficient used in this way.

The list of body systems showing disturbances or lesions due to paranasal sinus disease, even without suppuration, is being augmented. Ide reports a psychosis cured by sinus surgery.

Acute and Chronic Otitis Media and Sinus Thrombosis—(August)—Samuel J. Kopitzky, New York.

Spielberg has studied the Eustachian tube on roentgenograms by injecting iodized oil. This knowledge is of value in radical mastoid operations where a part of the procedure is turned to the task of closing the Eustachian tube.

Porter's report on the intravenous injection of mercurochrome—220 soluble in the treatment of patients with otitic sepsis. His results have been good in the four cases in which he employed it. His procedure is as follows: If the patient is very septic, the maximum dose (5 mg. per kilogram of body weight) is not given; instead he gives 3 mg. per kilogram of body weight, repeating the dose after a short time. He feels that small doses allow a gradual load to be thrown on the kidneys, which can be cared for without difficulty. The drug should be given when the temperature is falling rather than when it is rising. In addition, if the red blood cells are below 2,500,000, whole blood transfusion should be given at the same time or before the mercurochrome is administered.

Woodhouse, in a study of 74 cases of chronic purulent otitis media associated with polyps, treated the patient by simple removal of the polyps. In the 48 cases which he was able to follow up, he noted a cessation of the discharge in 62.5 per cent; in 25 per cent of these 48 cases no recurrence of the polyps occurred, although the ear remained moist. The remaining patients were unimproved. He recommends the removal of the polyps in all cases of chronic purulent otitis media when no other complications exist, before resorting to the radical mastoid operation.

Much of the literature on acute otitis media is devoted to the occurrence of this condition in infancy.

Drury advocates the removal of adenoid tissue without administering anesthesia in cases of purulent otitis media in infants. Souper advocates the removal of both the tonsils and the adenoids in the treatment of a patient with otitis media following scarlet fever. Both these observers base their conclusions on the opinion that these procedures shorten the course of the otitis.

Hastings and Cullom stress the examination of the rhinopharynx in cases of otitic infection and the necessity of eradicating purulent foci in order to hasten the cure of the aural suppuration.

MONTHLY COMMENTS

Medical—Economic—Social

For some time the American College of Surgeons has been stressing the need of establishing fracture services in hospitals. Inquiry made at the headquarters of the college is answered by the statement that they have no list of hospitals where such services have been created nor have they any detailed recommendation as to what the procedure should be to establish such a service. It would seem that the college might well formulate methods and policies ere urging hospitals to institute such new services. It is easy to recommend but more difficult to accomplish the recommendation. We would like to hear if such service has been created in any Michigan hospital and if so what constitute the governing regulations.

There are far too many medical books and papers being written. If one scans medical journals he will find many, many mediocre articles, of little passing value and poorly written. To write a good paper requires more than a typewriter and a hasty transcribing of passing thoughts. We are not discouraging the writing of articles. We simply note that few men take time to write, to boil down their writings and compile necessary references. We do believe, however, that every doctor has at least one case a year that merits reporting with a brief comment thereon. We solicit such reports for The Journal.

Our State Commissioner of Health, Dr. Kiefer, has once more evidenced his ever willingness to co-operate with the doctors in the administration of his department of health. In this particular instance the examination of chauffeurs of public vehicles is delegated by law to the State Department of Health. This required the appointment of local examining physicians. In place of appointing one man in each city and county, Dr. Kiefer has adopted the liberal policy of accepting the report of physical examination made by any doctor who is a member of his County Medical Society. Value of membership in your County Society is thus again enhanced.

We are devoting considerable space in this issue to impart the views and opinions that were given at the dinner at the Michigan Union at the time of the University Hospital Clinic, held in November. We are quite sure that the mutual sentiment evidenced reveals the profession's interest in post-graduate education and that as this interest increases desired facilities for post-graduate study will be developed in Michigan. We confidently look forward to the development of one or two clinics and schools within our state where our members will be accorded excellent opportunity for continued study at stated intervals.

January brings taxes. Preachers, lawyers, plumbers are permitted to deduct from their income expenses incurred in attending state and national meetings. This is denied to doctors. Just why the discrimination no one knows. For two

years the A. M. A. Bureau on Legislation has been endeavoring to secure a change in this ruling. By persistent diligence, signs are now hopeful that this ruling will be altered. It is hoped that the change may be authorized in order to apply on 1927 returns.

Last month we imparted some figures on the "Cost of Being Born." Doctors have been blamed for the apparent increase. If you checked over the figures we wonder if you noted in the one cited case where the cost was given as \$430.24 that the doctor only received \$50.00 and in the \$888.26 case the specialist only received \$150.00. Our economists might well stress the fact that the high cost of "birthing" is not chargeable to the medical profession.

Happy New Year. Here is hoping that the fullest measure of happiness shall be yours throughout 1928.

January, with its long evenings, will afford you opportunity for engaging in a sustained course of reading. Get out your Journals, recent textbooks and reprints and with the old pipe equal the time you spent on the golf course or fishing by "catching-up" on your neglected reading.

Dues! Your 1928 dues are now payable. Get it off your chest by sending your check to your County Secretary today. Relieve your local Secretary of having to camp on your trail by prompt payment. Your annual dues bring you greater returns than any other investment you own.

Life insurance companies still seek to impose upon doctors and endeavor to obtain free medical opinions relative to applicants for insurance. Today we again encountered such an incident wherein a company wanted to know what our findings were and prognosis following a laparotomy in an applicant for insurance. We requested the agent to pay a consultation fee before imparting the information, telling him that we never gave opinions to insurance companies without remuneration. Incidentally we imparted our opinion of corporations who thus grafted on doctors. The agent informed us that insurance companies would continue to secure such free information and opinions as long as doctors were willing to give free advice. And there you are—we repeat anew; you are an "easy mark" doctor, if you continue to give free information and opinions to insurance companies. When the request comes, return the letter with the notation that you will impart the desired information as soon as they send you a check. Don't let 'em talk you into it by saying your attitude is depriving the individual from obtaining insurance. You are not, for agents do not as a rule let a prospect get away so easily. Demand your fee, get it in your mit before giving information. We got our ten spot and during the year we secured several such fees. Of course, if you want to be a "fall-guy",

that's different. On the other hand, such a fee now and then helps to buy gasoline and removes you from the "easy mark" class. You can determine your own classification.

If you want to go to Europe there are plenty of scheduled trips listed that will afford you much pleasure and enable you to see the old world with enjoyment. We discourage clinical tours, for from a scientific and profit standpoint they are of little value. Our American clinics will teach you all you can possibly absorb and apply in your work while clinic tours will profit you very little. Tour for pleasure, not for study. Do your studying in your own neighboring clinics in this country and enhance it by attending the meetings of your county, state and national organizations.

There is an occasional criticism voiced, but spreading, arraigning periodic physical examinations. The discussion is more frequent among the laity. The criticism is that the examination does more harm than good. It is based upon the assertion that when an individual following such an examination learns that he has a beginning hypertension, arteriosclerosis, some kidney change, or minor heart defect, the gaining of that knowledge has such a psychic effect and depression and deprive him of ignorant bliss

through a period of years, in which he might work free from worry, ere his condition progressed to disablement. Benighted fools, elevating ignorance over truth, when truth means increased span of life. However, such critics exist, evidencing anew for a continuation of our public education with increased intensesness. We wonder, though, if the criticism did not emanate from the scientists and cults and thus evidence the ulterior motive of pursuers of such follies.

The importance of prompt payment of dues was again made apparent this past month. A member failed to pay his 1927 dues until November, 1927. Consequently he was not in good standing from April to November, 1927. In December, 1927 suit was begun against him for services rendered in September, 1927—while he was in suspension as a member. Under our medico-legal rules defense can not be furnished to him. Hence his dereliction in failing to pay his dues will entail his employment of an attorney at a fee that would have paid his annual dues for twenty to thirty years. Neglect in failing to promptly pay annual dues may be as costly to you for you, too, are ever liable to have some disgruntled patient connive with an attorney and start suit. Hence we urge that your check for current dues be promptly mailed to your County Secretary.

OUR OPEN FORUM

Affording Opportunity for Personal Expression

THANKS

Editor of The Journal:—

I have just finished reading your "Season's Greetings" to the members of the State Medical Society. May I as one of the humble members offer to you my thanks for all the hard work you have done to help make the Society what it is.

With the "Compliments of the Season" and best wishes for a very Happy and Prosperous New Year, I am

Fraternally yours,

William J. Stapleton, Jr.

DEER HUNTING

Editor of The Journal:—

Having been one out of the 70 members who returned their cards as unable to attend the University Clinic, with the notation, "Going deer hunting," and after reading your article in The Journal, December issue, asking for a report on our outing, it is with pleasure that I send this report to you.

Our party, consisting of Mr. and Mrs. Glen Wilson, Mrs. W. Hornsby, and baby Roberta Lucile, aged 3 years, and myself, left Clinton on November 10th, and drove to St. Ignace that night, and the next day, Friday, we landed on Neebish Island, where we were joined by Mr. A. E. Oliver, aged 67 years, Mr. and Mrs. George Oliver of Plainwell, Mich.

The next day we settled down to a quiet rest and recreation after our long drive, with a nice warm cottage, plenty of good dry wood piled

high on the back porch, good stoves and beds, thanks to Mr. Henry Theibert, and for our wait until the morning of the 15th.

A word about Neebish Island. Neebish Island is situated 18 miles south of the Soo, between the channels of St. Mary's river, on the east and west, with Sugar Island on the north and Drummond Island and St. Joseph's Island on the south and southeast. A beautiful place when the snow is on the ground around the edges of the water, but a wilderness when you leave the shore line and penetrate the swamps and lowlands on the inside.

It snowed the day before the season opened, then rained and froze, forming a crust, that could be heard by a deer a mile away, making very difficult walking. Every night the crust froze a little harder, and near the close of the season, the crust was frozen hard enough to hold a man up, also the deer. Imagine on the night of November 30, we had the best snow fall of the season, but it had come one day too late for us, just right for the deer.

It was the slipperiest fall in the history of the woods, and if the boys didn't fall a number of times daily they thought something was wrong, in fact, ice skates would have come in handy.

Our first week of hunting was very poor and the first man to bring home the bacon was Glen Wilson, and he brought in a 10-point buck on the eighth day. That made us feel better, and on the ninth day I dragged in an 8-point buck and so the chase was on. Then for the next few days we didn't get anything, but always when we came in at night, we found a good hot steaming supper

ready for four hungry men, but we kept hunting and on the 29th of November George Oliver killed a nice 4-point buck, and that left dad, so we placed him on runways while we three acted as dogs, and to save our lives we couldn't run those pesky old bucks out of the swamps, so dad could get a shot, and consequently dad had to come home without his deer.

We saw lots of does and fawns and they seemed to know that they were protected, as they were in no hurry to get out of gun range, but the nimble bucks seemed to know what was in store for them, for if you saw a flag you was a lucky man as they made their getaway, like the thief at night, sly and quiet.

We did not see many partridge or snow shoes and the natives on the island told us that the coyotes and wolves had about cleaned them out, and lots of times, in tracking deer, you could see a coyote track following the deer's track and several of the natives said the coyotes would kill the fawn, provided the mother doe didn't keep them whipped away.

Our party was not in favor of changing the dates for the opening of the season, but rather in favor of allowing a man a doe, providing he killed her accidentally, and could prove that it was an accident, rather than let her lay in the woods and spoil. We saw several such does killed and all spoiled for consumption.

Our party had a splendid time and at night after an all day hunt and a rousing good supper, we would enjoy the evening with the ladies, playing cards and cribbage.

And last, but not least, I must say that Dad Oliver was a good sport and a true woodsman, as he enjoyed the hunting fine, and although he came home with his metal tag in his vest pocket, he said, "I hope I can come back next year and I'll show you boys."

If you could manage to have the University Clinic, say November, first week, I am sure you

would not get the returns on the cards as you did this year, and we 70 men would say "YES" we will be there.

You can print this or do as you want to with it, as I am only doing as you asked.

Very truly yours,

W. B. Hornsby, M. D.

EXAMINATION OF CHAUFFEURS

Editor of The Journal:—

I am sending you two hundred applications for health certificates for chauffeur's license and 20 of them to the secretary of each county branch of the Society.

In all probability some physicians will have only one or two chauffeurs to examine and will want blanks in a hurry, in which case they may be supplied by you or their county branch.

Yours very truly,

Guy L. Kiefer, M. D.

POST-GRADUATE INSTRUCTION

I am enclosing a clipping from last night's Detroit News regarding the annual meeting of the Highland Park Physicians' Club.

I spoke upon the point of a great post-graduate school of medicine where the members of the state profession could obtain experience in most any way that they might choose. Also that a more experienced, better qualified and better equipped medical profession for Michigan meant better service to its citizenry with a healthier population and longer lives. That well trained men in different localities of the state would mean that much medical work would be done locally and that our state would be relieved of a portion of its medical burdens.

Hoping that this matter may be worked out to the satisfaction of the state profession,

Yours very truly,

Angus McLean, M. D.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

A Happy New Year. Start it right by reading this issue and then watch for each monthly issue. Some interesting articles and announcements will be found every month.

If it were not for our advertisers this Journal would not be possible. In return for their patronage you owe them your patronage. Peruse our advertising pages, answer the ads offering literature and samples and place your order with those who are able to efficiently fill your orders with dependable products.

WAYNE COUNTY MEDICAL SOCIETY

Program for January, 1928

January 3. General Meeting.

1. Election of State Delegates.
2. Address. Subject—"Colloidal Chemistry in Its Relation to Medicine." Professor Harry N. Holmes, Oberlin College, Oberlin, Ohio.

January 10. Medical Section.

1. Report of a case of incarcerated right para-duodenal hernia. Dr. Edward Dowdle.
2. Address. Subject—"Neuro-Surgery in Modern Practice; Prognosis, Diagnosis and Treatment." Dr. F. C. McClintic, Professor of Anatomy, Detroit College of Medicine. Discussion—Dr. Max Peet, University of Michigan, Ann Arbor.

January 17. General Meeting.

Subject—"Physical Treatment of Diseases of the Circulatory System." Professor Franz Groedel, Bad-Nauheim, Germany. Illustrated.

January 23. 8:30 p. m.—Beaumont Lectures.

Lecture 1—"The Human Constitution—What It Means and How to Study It." George Draper, M. D., New York City.

January 24. 11:00 a. m.—

Lecture 2—"The Patient and His Physician." George Draper, M. D.

January 24. 8:30 p. m.—

Lecture 3—"Sex Factor in Total Personality."
George Draper, M. D.

January 31. General Meeting.

In charge of Entertainment Committee.

The Detroit Oto-Laryngological Society are planning an excursion to the Mayo Clinic for a two days' meeting there.

They are to leave Detroit at noon Sunday, January 22nd, and spend Monday and Tuesday at Mayo's, where a special program is being prepared for them.

Wednesday will be spent in Chicago. The return to Detroit will be made in time for work Thursday morning, January 26th.

Those throughout the state who wish to join this party should get in touch with the Secretary, Dr. Wm. Fowler, 1048 Maccabees Bldg., at once.

The Highland Park Physicians Club will hold its next regular meeting in the nurses' dining

room of the Highland Park General Hospital on Thursday, January 5, 1928, at 8:30 p. m.

Subject—"The Relation of the Emotions to Disease," by Dr. Carl Camp, Ann Arbor, Professor of Neurology, University of Michigan Medical School.

The members of the Michigan State Medical Association are invited to attend.

DEATHS

Dr. Arthur E. Schnell, 57 years old, died November 29th following an illness of several months. He had practiced medicine in Detroit for the past twenty-three years.

Dr. Schnell was born in Rochester, N. Y. and was educated in New York City and received his degree from the St. Louis University. He was a member of the Wayne County Medical Society and the Michigan State Medical Society.

WOMANS AUXILIARY, MICH. STATE MEDICAL SOCIETY

MRS. GUY L. KIEFER, *President*
Lansing, Mich.

MRS. J. EARL McINTYRE, *Secretary*
Lansing, Mich.

THE WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

The Woman's Auxiliary to the American Medical Association is an organization composed of the combined membership of the State Auxiliaries, which in turn are made up of Auxiliaries to County Medical Societies.

The first Auxiliary was formed in 1917 at Dallas, Texas. Out of that grew similar organizations all over the state. In 1919 a State Auxiliary was organized in San Antonio, Texas.

Other states became interested in the work and in St. Louis, 1922, during the meeting of the American Medical Association, the matter of forming a National Auxiliary was presented to the House of Delegates. It was endorsed by that body and the Woman's Auxiliary to the American Medical Association was organized, with nine states enrolled.

It is now in its fourth year of national activity, having twenty-seven states already organized, with others in the process of organization—more than half the states in the union!

Where there is a County Medical Society there should be an Auxiliary. It has been uniformly noted that there is more interest and enthusiasm, and a greater spirit of comradeship among the members of the County Medical Society if there is an active Auxiliary working in the community.

The National Auxiliary does not attempt to dictate, but desires to co-operate with all Auxiliaries in carrying out their work.

The object of the Woman's Auxiliary to the American Medical Association is to be all that its name implies—an aid, a reserve force—an Auxiliary! Organized for the purpose of re-

sponding to any call from the medical profession.

To do all the work assigned to it from time to time by the American Medical Association.

To promote closer contact between the families of physicians.

To assist in lightening the burdens of humanity.

To help preserve the health of the people.

The members of the Woman's Auxiliaries to the American Medical Association are those who have paid their annual dues to the National organization through their County and State Auxiliary.

Where there is no local Auxiliary a physician's wife may become a Member-at-Large by paying annual dues of \$2.00. Wives of the members of the Medical Corps of the Army, the Navy, and the Public Health Service are especially invited to become members-at-large, if it is impossible for them to have county affiliations.

Each state sends its Auxiliary president and president-elect, two delegates and their alternates to represent it at the annual session which meets at the same time as the American Medical Association.

Every phase of the work is first passed upon by the executive board, which meets just before the annual session. After the election of officers, the new executive board is called together to hear the plans outlined by the incoming president.

Another called meeting is usually held in the fall before the activities begin. Matters of immediate importance should be referred to the president and members of the liaison committee. This committee is appointed by the trustees of the American Medical Association.

For this year the National Auxiliary Board has accepted the following recommendations from the president:

To organize Auxiliaries in unorganized states and to urge all state presidents to form Auxiliaries wherever there is a County Medical Society.

To outline health programs approved by the liaison committee to be presented before other organizations.

To secure, if possible, moving pictures to illustrate the importance of the annual physical examinations by the family physician. Each member of every household, servants included, should be examined.

To recommend to all clubs that they place capable physicians' wives in charge of club health departments, in order to secure authoritative programs.

To assist in providing Health Talks over the radio by prominent physicians and health officers. These speakers should be appointed by the County Medical Society.

To continue our efforts to place Hygeia in every home, as it is the leading health magazine of the United States and is published by the American Medical Association.

To appeal especially to physicians to aid in the Hygeia campaign, as the commissions received enable the Auxiliaries to extend their activities.

To suggest Hygeia subscriptions as Christmas gifts, and also as gifts to expectant mothers. The helpful, healthful suggestions she finds in Hygeia are more lasting than perishable flowers or breakable toys.

To recommend to Auxiliaries that they give benefit entertainments to create a fund for Hygeia, which will be used as gifts of subscriptions to schools, legislators, churches and libraries.

Hygeia has offered to give subscriptions to the magazine as prizes for these entertainments.

To publish our own Bulletin monthly in order to keep alive the interest of the members, and to present the work to physicians' wives who are not yet familiar with Auxiliary activities.

In order that the greatest possible good shall be accomplished it is necessary that the Woman's Auxiliary to the American Medical Association have the full co-operation of all the members of the American Medical Association and their wives. It is the earnest endeavor of the Auxiliary to bring its work to the attention of all who are interested in the welfare of our people.

Every physician's wife should feel it a privilege as well as her duty to promote dependable health education, not leaving it in the hands of those who are interested in spreading the propaganda of various cults.

She can aid materially in the Auxiliary's effort to impress upon all club members a proper conception of the real mission of organized medicine, especially in its crusade of Preventive Medicine.

She may gain much from her club activities, but she can give even more to her club co-operating with the Auxiliary in its health education program.

A woman forfeits none of her own happiness nor her family's when she lends her time and influence beyond the confines of her own household. Her power is made greater and her outlook on life clearer by her contact with other women.

HOW STATE AUXILIARIES ARE ORGANIZED

It is useless to try to interest the wives unless their husbands believe in the Auxiliary.

A member of the national organization com-

mittee should be invited to appear before the House of Delegates. If the Auxiliary receives the endorsement of that body, the state president of the Medical Association then appoints the capable wife of a physician to assist the organizer in calling together the wives of physicians who are attending the meeting. If they vote to organize an Auxiliary the officers are elected and the newly elected president appoints her committees.

Ordinarily the officers are: President, president-elect, four vice presidents chosen from each section of the state; secretary, treasurer, auditor and parliamentarian.

The president appoints her own corresponding secretary.

The standing committees may be organization, finance, health education, Hygeia, program and public relations.

The chairmen of these committees, the officers and state presidents constitute the executive board, which should meet and discuss plans for the year.

At first the most important work is the organization of Auxiliaries to the County Medical Societies over the state. The state president of the Auxiliary should write a letter to each president of County Medical Societies to ascertain if they desire an Auxiliary. If the Medical Society endorses the Auxiliary, one of the state organizers is put in touch with the wife of one of the members of the County Medical Society who will call the wives together for organization. If possible, the chairman or some member of the organization committee meets with the physicians' wives to aid them.

It is recommended that each Auxiliary send its president-elect and two delegates and their alternates to the annual session which meets at the same time as the State Medical Association.

ACTIVITIES

The work of County Auxiliaries may be divided into three groups—social, philanthropic and educational. Each group may be headed by a vice president.

Auxiliaries should meet each month from October to June, making reports and recommendations.

In addition to the reports of the committees, a paper may be read or a speaker provided to address the members on subjects of particular interest to them.

A social hour may follow with light refreshments.

SOCIAL GROUP

This group may be divided into the following committees: Membership, telephone, courtesy and entertainment.

The membership committee keeps the members active in securing new members. This committee visits the wives of members of the County Medical Society, enlisting interest in the local work.

The telephone committee divides the membership, each taking an equal number of names; it is their duty to telephone each member at least one week in advance to remind them of the time and place of meeting, and to ascertain how many can attend. The lists of acceptances are turned over to the chairman of the entertainment so that she may know for how many to provide. The chairman of the telephone committee informs the members of the executive board of their meetings.

When the Medical Society wishes some prompt service from the Auxiliary, the telephone committee can get the information to the entire membership within a few hours.

The courtesy committee calls upon the wives of physicians soon after they become members of the County Medical Society.

If a member is ill or bereaved, this committee lends its sympathy and service. Visits are made also when out-of-town physicians' families are ill in local hospitals. Courtesies are extended to wives of physicians while they are visiting the city.

The entertainment committee may select the place of meeting, appoint hostesses for the season, and provide refreshments, except when an individual member wants to entertain. Each member may be assessed her pro rata for the entertainments, or it may be added to the dues for the year. The refreshments should be light and within the means of all the members.

The first meeting of the season may be an afternoon tea given in honor of the officers. The president makes a short talk and announces committees which she has appointed to carry out the plans for the year.

Near the holiday season an evening affair may be given in honor of the president and officers of the County Medical Society.

The last meeting of the season may be an afternoon program given in honor of the mothers of the physicians.

The annual reports and election of officers may come before the program.

When there is a state or a national medical meeting, the entertainment committee co-operates with the County Medical Society committee in providing entertainment for the visitors. In cases where the details were left entirely to the Auxiliary entertainment committee, it has been found satisfactory and less expensive.

PHILANTHROPIC GROUP

This group is divided into as many committees as are necessary to carry on the work as outlined by each individual auxiliary.

It is recommended not to undertake too much at first, but to increase the activities as the interest grows. There is always more to be done than there are funds available with which to "carry on". Each Auxiliary selects the greatest need of its community and undertakes to make its influence felt by co-operating in every possible way with charitable enterprises of the city.

Committees and sub-committees undertake the following:

To visit all the charity wards of the hospitals, taking fruits, flowers, etc.

Books and toys are taken to the Children's Hospitals, and a story hour provided for the convalescents.

Layettees are made for needy mothers.

Showers of linen and clothing are given for the Baby Hospitals.

Surgical dressings and aprons made for doctors and nurses in their charity work.

Gowns and bedjackets for Tuberculosis Hospitals.

Visits are made to institutions for the aged, furnishing them with diversion and entertainment.

Soldiers, old and young, are provided with

games, radios, victrolas, edibles, automobile rides, Christmas trees, etc.

A milk fund is provided for undernourished school children.

Healthful school lunches prepared and served to school children at minimum cost.

First aid tents furnished Boy Scouts, rest tents for Salvation Army camps.

Stockings filled and sent to Empty Stocking Crusade, Christmas boxes furnished Red Cross for distribution.

Donations to Community Chest.

Loans to needy physicians' families.

EDUCATIONAL GROUP

This group consists of two important committees—education and program—and as many sub-committees as are needed to carry on the work.

The program committee selects the subjects to be discussed at each meeting and provides the speakers.

This group prepares a tribute to the members who die during the year, which is read at the last meeting of the season.

They assist in providing prominent and able speakers on the radio.

Outline campaigns for securing birth registrations.

Co-operate with Chambers of Commerce and their health programs.

Furnish reports each month of current events in medical progress.

Interest boys and girls in giving health plays in schools.

Co-operate with health officers in their work, especially in rural districts.

Furnish good speakers to go before clubs to present health programs with moving picture illustrations.

Create sentiment for County Health units.

Assist legislative committees of County Medical Societies, when needed, in promoting good health measures—but carefully avoiding participation in any kind of politics whatsoever, except upon the recommendations of the local county or state medical organization or the liaison committee to the Auxiliary.

The health education committee makes a study of the subject to be discussed throughout the year.

Health laws pertaining to county and state.

What constitutes pure milk and water.

Food and sanitation.

Midwife problems.

History of medicines.

Lives of great physicians.

History of American Medical Association, etc.

They offer scholarships to sons and daughters of physicians.

Gives prizes for the best:

Essay on Health.

Physical test of school children.

Sanitary school buildings.

Best drilled R. O. T. C.

Boy Scout who makes best physical record.

Cleanest block in city.

SOLICIT HYGEIA SUBSCRIPTIONS

It is recommended that Auxiliaries assist in providing homes with libraries where County Medical Societies can meet.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

BAY COUNTY

The following are the newly elected officers of the Bay County Medical Society:

President, Dr. E. F. Crummer, Essexville, Mich.

Vice President, Dr. H. P. Lawrence, Bay City.

Secretary-Treasurer, Dr. L. Fernald Foster, Bay City.

The annual meeting of the society was held Wednesday, December 14, at 7 p. m., at the Wenonah hotel. It was the largest attended meeting recorded by the society, 52 members being present.

The complimentary banquet of retiring president, D. T. Smith, was followed by the reports of committees and officers.

At the same hour the Ladies' Auxiliary of the society was formed in another meeting at the hotel. Thirty-two women were present and the following Auxiliary officers elected:

President, Mrs. A. W. Herrick.

Vice president, Mrs. P. R. Urmston.

Secretary-Treasurer, Mrs. A. D. Allen.

The following officers of the Bay County Medical Society were elected for the coming year:

President, Dr. E. F. Crummer.

Vice President, Dr. H. P. Lawrence.

Secretary-Treasurer, Dr. L. Fernald Foster.

Delegate, Dr. D. T. Smith.

Alternate, Dr. V. H. Dumond.

L. Fernald Foster, eSecretary.

HILLSDALE-BRANCH-ST. JOSEPH CO.

The regular joint meeting of the Medical Societies of the counties of Branch, St. Joseph and Hillsdale, was held at the Mitchell library on Friday evening, December 9, 1927, at 6:30. After an excellent dinner at the Lantern Tea Room, the meeting was at once called to order by the president, Dr. H. C. Miller, who introduced the speaker of the evening, Dr. H. Alexander of the University of Michigan. Dr. Alexander addressed the societies on "Phases of Thoracic Surgery" in a most instructive manner. He called attention to the danger of premature and ill-considered operations in some cases and of procrastination and timidity in others; with general description and technic of operations on the chest, including some considerations of heart lesions and traumatism.

Much of the information brought out was entirely new; not found in text books and derived from experience gained during the World War. He covered the whole vast subject in a general way as far as possible in the time at his disposal.

Dr. Alexander was warmly thanked by the president in behalf of the Societies for his timely and most instructive address.

The subject of Public Health was then taken up and it was moved and supported "That the Hillsdale County Medical Society once more go on record as favoring the employment of a full-time Health Officer." Carried unanimously.

Moved, supported and carried, that Dr. Sawyer be made chairman of a committee of three, his associates to be chosen by himself, to formulate plans for a community clinic to examine defective children found by the county nurse, Mrs. Barnstead, in her rounds, and recommend that their parents place them in care of their family physicians for treatment in such cases are are not already under treatment.

Moved, supported and carried that Dr. Fenton be made delegate to the "Conference for Race Betterment," to be held at the Sanitarium, Battle Creek, January 2 to 6, 1928, and directed to give a report of the proceedings of the conference to the Society.

Adjourned.

D. W. Fenton, Secretary.

IONIA-MONTCALM COUNTY

At the annual meeting of the Ionia-Montcalm County Medical Society, held at Belding, Thursday evening, December 8, the following officers were elected:

President, Dr. F. A. Johnson, Greenville.

Vice President, Dr. H. M. Maynard, Ionia.

Secretary-Treasurer, J. J. McCann, Ionia.

Delegate, C. H. Peabody, Lake Odessa.

H. M. Maynard, Secretary.

LENAWEE COUNTY

The regular meeting of the Lenawee County Medical Society was held on the evening of November 22, 1927, at the Lenawee hotel in Adrian.

The meeting began with a chicken dinner at 7 p. m., and the scientific meeting followed.

The meeting was called to order by the President, who introduced the speaker, Dr. Arthur E. Schiller of Detroit. He gave an informal talk on the "Etiology, Diagnosis and Treatment of the Different Forms of Epidermophytosis." Dr. Schiller illustrated his talk with a few excellent lantern slides.

There was a meeting of the program committee after the meeting and an outline program was arranged. The program will be published in The Journal at a later date.

R. G. B. Marsh, Secretary.

GRATIOT-ISABELLA-CLARE CO.

The November meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Park house, St. Louis, Thursday, November 10. Supper was served to 19. The speaker was Dr. Carl E. Badgley of the University Hospital. Subject, "Fractures of the Upper Extremity." Beginning with the fingers, the doctor took up each fracture in detail, both as to reduction, and after treatment, showing X-ray pictures as he went along. Needless to say, the doctor made the subject very interesting and instructive.

E. M. Highfield, Secretary.

The December meeting of the Gratiot-Isabella-Clare County Medical Society was held in the

Park house, St. Louis, December 8. Supper was served to 15, after which the following officers were elected for 1928:

- President, W. E. Baestow, St. Louis.
- Vice-President, A. D. Hobbs, St. Louis.
- Secretary-Treasurer, E. M. Highfield, Alma.
- Delegate, C. F. DuBois, Alma.
- Alternate, M. J. Bridge, Ithaca.

Doctor Edward Cathcart of the G. U. department of the University Hospital then talked to us on the "Obstructing Prostate." Some expected this to be a pretty dry subject, but Doctor Cathcart made it very interesting, occasionally injecting a little humor along with some very practical directions on how to manage patients with prostatic obstruction.

E. M. Highfield, Secretary.

I have been requested by Dr. Ullrich, president of our society to send you a resume of the work of our society for the past year. Irrespectfully submit the following:

- January meeting address: "Diverticula", Dr. Hugo Freund.
- February meeting address, "Skull Fractures", Dr. Chas. Kennedy.
- March meeting address, "Public Health", Dr. E. G. Folsom.
- April meeting address, "Malignant Disease", Dr. Angus McLean.
- May meeting address, "Treatment of Syphilis", Dr. Geo. V. Rhee.
- June meeting address, Business meeting.
- October meeting address, "Gastro-Int. Conditions", Dr. F. Steinbach.
- November meeting address, "Etiology, Course and Treatment of Nausea and Vomiting of Pregnancy", Dr. Jos. N. Scher.
- December meeting address, "Public Health", Dr. Don. Griswald.
- Election of officers.
- The following were elected for 1928:
 - President, Dr. R. W. Ullrich.
 - Vice-President, Dr. A. B. Bowers.
 - Secretary, Dr. Jos. N. Scher.
 - Treasurer, Dr. W. H. Norton.

Joseph N. Scher, Secretary.

CALHOUN COUNTY

The year 1927 has been characterized in the Society by an increased average attendance at all the meeting. This has been largely the result of the efforts of the program committee, in bringing to our sessions some of the best talent available.

The most impelling force in producing good attendance records is the quality of the programs. Given a program of the highest sort obtainable, and there are really very few who cannot attend.

Based on the attractiveness of the programs, the following record shows who our most attractive speakers were the year just past:

- 1. January Meeting—J. B. Jackson and F. C. Warnshuis 57
- 2. February Meeting—George E. McKean and Dr. Sleight..... 54
- 3. March Meeting—E. P. Joslin..... 88
- 4. April Meeting—F. H. Albee and A. C. Selmon 90
- 5. May Meeting—Genito-Urinary Symposium 49
- 6. June Meeting—Kalamazoo Country Club Meeting 56

- 7. September Meeting—J. D. Bruce, Ann Arbor 48
- 8. October Meeting—E. L. Cornell and J. M. Neilson 37
- 9. November Meeting—C. C. Sturgis, Ann Arbor 41

The attendance for the nine meetings held thus far this year averages 55 per cent of the total membership. An attempt has been made to cover the main divisions of medicine, which gives variety to the papers, and with no repetition of papers by the different speakers.

The Society has sponsored the organization of the Women's Auxiliary, and this body is now well enough organized to take care of itself. It plans to hold its meetings quarterly.

The Public Health Education Committee feel that this work can perhaps be best carried on through the medium of the health magazine, "Hygiea," and have subscribed for 249 copies of this journal for all the schools and libraries of the county.

The members added this year are six in number, as follows:

H. F. Becker, C. G. Fahndrick, Ross R. Hilborn, Caroline Hilborn, Amos J. Rivers, Wilma C. Weeks.

The deceased members for 1927 are as follows: W. E. Doran, Sven Jespersen, *H. M. Dunlap, *W. E. Dockery.

*Former members.

Dr. L. D. Funk has resigned from the Society, and Dr. E. A. Oakes has removed from the county.

Treasurer's Report: Disbursements—

Entertainment—Guests and speakers.....	\$ 107.85
Printing Bulletin	114.95
Postage, telephone and telegrams.....	29.65
Per capita of \$10.00 to State Society.....	1,070.00
Stationery and printing.....	25.50
A. M. A. Directory.....	12.00
Flowers	3.00
Hygiea subscriptions	349.65
Secretary's fee	50.00

Total\$1,762.60

Receipts—

From former treasurer	\$ 199.53
From 107 members dues	1,605.00

Total\$1,804.53

Balance on hand\$ 41.93

Minutes—The November meeting of the Calhoun County Medical Society was held at the Post Tavern at eight o'clock, following a dinner, which was attended by 25 of the fellows.

Secretary's report as printed in Bulletin was adopted, and the following bills were read and ordered paid: Phoenix Printing company, \$11.25; Secretary's office, \$3.50.

The name of Dr. Edwin Hansen was proposed for membership. His application was signed by Dr. J. E. Cooper and Dr. J. J. Holes. On motion the application was referred to the Membership Committee.

The County Board of Supervisors extended an invitation to the Society to hold a medical meeting at the County Hospital, and it was moved that this invitation be accepted for the January meeting. Carried.

Dr. Hafford, speaking for the Albion physicians, invited the Society to hold a meeting in Albion at some future time; the details to be worked out by the Program Committee.

The scientific program was the next order of

business, and Dr. C. C. Sturgis, of the Simpson Memorial Institution, of Ann Arbor, gave a most interesting talk on the subject of "Pernicious Anemia."

KALAMAZOO COUNTY

Minutes of the November Meeting—The regular monthly meeting of the Kalamazoo Academy of Medicine was held in the rooms of the Academy, November 15, 1927.

Dinner was served at 6:30 and following the dinner the society listened to a very interesting talk, illustrated by lantern slides, given by Professor L. A. Kenoyer on "A Summer in Panama."

The business session was called to order by the president, Dr. Bartholomew at 8:30 p. m.

The minutes of the October meeting were approved as printed in the bulletin.

Dr. Paul L. Schrier and Joseph S. McCarty whose names had been presented for membership at the September meeting, and who had been approved by the board of censors were voted into active membership in the society.

Dr. Wilbur C. Medill was voted into active membership on his request for transfer from the Jackson society. The application of Dr. William N. Kenzie was presented for membership in the society.

The president appointed Doctors Gregg, Lang, Rogers, Van Ness and Goodrich to act as the nominating committee for the annual meeting.

No further business being presented before the society the meeting was turned to Dr. Milard Smith of the University of Michigan who gave a very interesting and instructive paper on "Arthritis." A general discussion of the subject followed with many questions for Dr. Smith's elucidations.

Treasurer's Report, Dec. 8, 1927: Receipts—

Dues from members	\$1,858.00
Donations to "float"	15.00
Total receipts	\$1,873.00

Disbursements—

State Society	\$1,130.00
Guests	76.75
Bulletins	161.65
Postage and Stationery.....	120.00
Telephone and Telegraph.....	82.85
Light	9.25
Flowers	10.00
Insurance	35.00
Taxes	12.00
Miscellaneous	219.19

Total disbursements	\$1,856.69
Excess Receipts over disbursements	16.31
Cash on hand, Dec. 28, 1926.....	794.93
Cash on hand, Dec. 8, 1927.....	\$ 811.24

Secretary's Annual Report—The past year has been an unusually prosperous and happy one for the Kalamazoo Academy of Medicine. The spirit of harmony has prevailed and with the advent of our new kitchenette and the excellent dining service furnished by our social committee fellowship and friendliness has been a predominate feature of our meetings. It is to be hoped that the spirit may be fostered throughout the years to come.

Live speakers and excellent programs have been

an irresistible drawing card contributing their full share to the excellent attendance record for the year.

A Woman's Auxiliary has been organized in connection with the society and their plans speak well for many future benefits to the profession.

A goodly number of new members have been added to our roll and we would again call your attention to their names: L. D. Becker, Ralph B. Fast, Louis L. Gerstner, Joseph S. McCarty, Wilbur C. Medill, C. L. Penoyar, H. R. Pepin, Paul L. Schrier, James H. Swan, T. H. Ransom, F. W. Heyl and Wilbur B. Payne. Nine active members, two associate members and one re-instated.

The angel of death has passed us by; none has moved from our midst; and only one of our former members has deemed the society unworthy of the payment of dues.

As your secretary relinquishes the pen to a more worthy wielder, he wishes to express his appreciation for your loyal support of the past three years and trusts that errors of omission as well as those of commission will be forgotten. Your same loyal support to the new secretary will do much to keep the Kalamazoo Academy of Medicine among the foremost medical societies in the country.

MUSKEGON COUNTY

At a meeting of the Muskegon County Medical Society, held in the Community room of the Union National Bank, December 9, 1927, the following officers were elected for 1928.

President, Dr. C. J. Bloom.

Vice-President, Dr. S. N. Morford.

Secretary-treasurer, Dr. Louis LeFevre.

Legal Advisor, Dr. George L. LeFevre.

Delegate to the Sate Convention, Dr. V. S. Laurin.

Alternate Delegate, Dr. F. W. Garber, Sr.

The retiring president, Dr. Kniskern, addressed the society, thanking its members for their cooperation during his term of office.

The meeting adjourned at 9:15.

ALPENA COUNTY

At the regular meeting of The Alpena County Medical Society, held on December 15 the following officers were elected for the year 1928.

President, Wm. B. Newton, Alpena.

Vice-President, J. S. Jackson, Alpena.

Secretary-Treasurer, C. M. Williams, Alpena.

Delegate, State Society, C. M. Williams, Alpena.

Alternate, H. J. Burkholder, Alpena.

Legal Representative, E. L. Foley, Alpena.

The report of the Secretary revealed the Society in fine condition financially and otherwise, with a membership of 18. There were 12 regular meetings, and two called meetings, held during the year. Two reciprocal meetings with other Societies were held, one with The Northern Michigan Medical Society, at Indian River, and the other with The Bay County Society. During the past year we had the pleasure of a visit from our State Commissioner of Health, accompanied by his lovely wife, at which time our regular meeting gave way for a special meeting in honor of Dr. and Mrs. Keifer. In October, we had a Post-Graduate Conference under the auspices of State Society at which time Doctors Marshall and Randall of Flint and Doctors Brown and Braley of Detroit, gave us a most instructive program

which was very well attended and most heartily received. In November we had our Annual Ladies Night at Lake Winyah Country Club which was a highly enjoyable and well attended meeting.

For some years past The Alpena County Society has enjoyed the reputation of being one of the really live smaller County Societies of the state and we have endeavored in the past year to fully live up to that reputation and we were much pleased to have such a gracious acknowledgement of our efforts as was given by our Councillor, Dr. VanLeuven, in the last issue of The Journal.

Yours for a Happy New Year, filled with effort and crowned with accomplishment.

Wm. B. Newton, Secretary.

BERRIEN COUNTY

The Berrien County Society had one of the most pleasant as well as profitable meetings of the year on the 30th of November.

This meeting was held at Nile at the Four Flags Hotel, and was preceded as usual by the monthly dinner.

A short business meeting was held before the paper of the evening. At this time the President announced the committee of Doctors Tonkin, Witt, and Sowers who were to report before the next meeting the nominee's for 1928.

The paper for the evening was given by Dr. Louis J. Hirschman of Detroit on "The Rational Treatment of Hemorrhoids". Although this talk was of primary importance to Proctologists and Surgeons, yet it was made through Dr. Hirschman's personality, extremely interesting to the general practitioner.

His slides were excellent and his explanation of technic was so well given that the talk was more than worth the while of all those present.

The meeting was largely attended and there were several visiting men from the South Bend Society present.

A vote of thanks was given Dr. Hirschman by the Society for the excellence and interest of his paper.

W. C. Ellet, Secretary.

HIGHLAND PARK PHYSICIANS CLUB

On December 1, 1927, the Highland Park Physicians Club held their Second Annual Clinic, and the following program was given before 300 members of the Medical profession of Michigan, Ohio and Ontario.

Morning Session

9:00-10:00—Demonstration of setting of fractures by moving pictures.

Dr. George Ewart Wilson, Toronto; head of Surgical Department, St. Michael's Hospital.

10:00-11:00—Address and Lantern Slide Demonstration, "The Orthopedic Treatment of Poliomyelitis."

Dr. Edwin Warner Ryerson, Chicago.

11:00-12:00—Address and Lantern Slide Demonstration, "Unforeseen Deaths from Diseases and the Associated Conditions Found Post Mortem."

Dr. E. R. LeCount, Chicago; Professor and Head Department, Pathology Rush Medical College.

12:00-1:00—Clinic. The Story of Peptic Ulcer and its Surgical Management.

Dr. Arthur Dean Bevan, Chicago; Professor

and Head of Department Surgery, Rush Medical College.

1:00-2:30—Buffet Luncheon by the Highland Park General Hospital.

Afternoon Session

2:30-3:30—Clinic with Lantern Slide Demonstration, "The Relation of Oto-Laryngology to General Practice."

Dr. Millard F. Arbuckle, St. Louis; Professor of Oto-Laryngology at Washington University School of Medicine.

3:30-4:30—Clinic with Lantern Slide Demonstration, "Cancer of the Stomach."

Dr. F. N. G. Starr, Toronto; President of the Ontario Medical Society.

4:30-5:30—Address, "Chronic Infections of the Urinary Tract", Dr. Edward Cathcart, Ann Arbor, Assistant Professor Surgery, University of Michigan Medical School.

Evening Session

6:30—Dinner.

8:30—Address, C. E. Gettins, Mayor Highland Park.

Address, "Our State Society's Interest in the Individual Physician.

Dr. Herbert E. Randall, Flint, President Michigan State Medical Society.

Address, Dr. Angus McLean, Detroit.

Address, Dr. F. N. G. Starr, Toronto.

Address, "The Abdominal Emergencies", Dr. George E. Wilson, Toronto.

Executive session.

Election of officers.

At the executive session the following officers for the year 1928 were elected unanimously.

Dr. William N. Braley, President.

Dr. C. C. Vardon, Vice-President.

Dr. Chas. J. Barone, Secretary.

Dr. Melvin O. Kernick, Treasurer.

It is the intention of the Highland Park Physicians Club to continue the annual clinics since the first two were very successful. A clinic to be a success has to contain good talent, must have good clinical material, and lastly must be well attended.

For the attendance, I want to take this opportunity to thank those that came to our clinics. Next year our plans are for as good, if not a better clinic, and I hope the physicians from the Michigan State Medical Society will support it as well as they have supported our past efforts.

Chas. J. Barone, Secretary.

KENT COUNTY

The Kent County Medical Society has held two meetings each in October and November. All these meetings were held in the Solarium of Butterworth Hospital. At the first meeting, October 12, a clinical program was presented, consisting of the following:

1. "Acute Pancreatitis", A. J. Baker, M. D.
2. "Unusual Case of Foreign Body in the Eye", John R. Rogers, M. D.
3. "Case Report of Hemolytic Jaundice, Complicated with Pregnancy, and its Treatment", Margaret Miller, M. D., Leon C. Bosch, M. D.

At this meeting, Dr. Guy L. Kiefer, State Commissioner of Health, discussed the need for the establishment of a county health department in Kent County. He wished to obtain the approval

of the Kent County Medical Society for this project and advocated its establishment for these reasons, namely: First, the need for a medical health officer; second, the need of adequate medical supervision for the nursing staff; third, to protect the county better against the spread of contagious disease; fourth, to promote health education. He further stated that funds for this organization could be obtained in part by assistance from the State of Michigan and the Rockefeller Institute. The remaining amount due he felt would only increase the tax about 15 cents on a \$5,000 valuation. The total cost of this organization would not greatly exceed the present amount expended by the various townships; if so established, this would be the first county health organization in the state of Michigan.

The establishment of this county health department was approved by the Society, but failed of passage by the Board of Supervisors of Kent County.

The chairman of the committee on clinics, Dr. John R. Rogers, reported from his committee a recommendation that the following appointees constitute, along with the present committee on clinics, a joint committee on clinics, the members recommended being representatives from the respective clinics names:

Infant Feeding—T. D. Gordon.
Tuberculosis—E. N. Nesbitt.
Butterworth Hospital—A. J. Baker.
St. Mary's Hospital—E. B. Anderson.
Blodgett Hospital—D. M. Morrill.
Orthopedic Clinic—John T. Hodgen.
Prenatal Clinic—A. M. Campbell.

It is the intention that the duties of this augmented committee shall be not only the investigation of clinic abuses, but that its more important function will be to inform itself on all matters pertaining to clinics, and to report to the medical society from time to time the result of its investigation.

On the evening of October 25, 1927, the following program was rendered:

1. "Practical Points in Prenatal Care", (with lantern slides), E. B. Andersen, M. D.
2. "Some Remarks on Traumatic Surgery", (with lantern slides), R. F. Webb, M. D.
3. "The More Common Infections of the Kidney", L. M. McKinley, M. D.

The program on November 9 was as follows:

1. "Child Placement for Adoption as a Modern Scientific Procedure", Miss Helen I. James, Secretary of the Michigan Children's Aid Society.
2. "Surgery in Arthritis Deformans; Amiodoxyl as and Adjunct in Treatment, Showing Case with End Results of Hip Arthroplasty", J. C. Foshee, M. D.
3. "Certain Intestinal Conditions in Cases of Obscure Fever", Merrill Wells, M. D.

At the meeting on November 25, 1927, a communication was read from the Director General of the American College of Surgeons, Dr. Franklin H. Martin, which contained the text of a resolution conveying the thanks of the Surgical Section of the Royal Society of Medicine for the demonstration of American surgery and hospital-ity shown by American physicians and surgeons, in connection with their visit to Grand Rapids.

The following program was given:

1. "Thyroidectomy: Its Relation to the Cure of Thyroidtoxicosis", W. A. Hyland, M. D.
2. "The International Goitre Conference at

Berne, Switzerland", illustrated with moving pictures, Elmer W. Schnoor, M. D.

3. "The Heart in Toxic Goiter", Henry J. VandenBerg, M. D.

The following physicians have been elected to membership in the Kent County Medical Society since its first meeting in September; namely: L. M. McKinlay, G. R. National Bank building; A. R. Hufford, Medical Arts building; F. J. Bean, Grand Rapids Clinic; T. P. Bishop, Medical Arts building; F. J. Bull, G. R. National Bank building; J. TenHave, 750 Leonard; John F. Yonkman, Metz building; C. E. Osborne, Medical Arts building; William R. Torgerson, Grand Rapids Clinic.

H. T. Clay, Secretary.

LENAWEE COUNTY

The year of 1927 has ended so far as the Lenawee County Medical Society is concerned in an active way. We feel that we have had a fairly good year, and that we are ready to begin a bigger year for 1928. We have our program all planned and the speakers engaged for over half the year.

We had 11 meetings, and all of them were well worth attending. Our attendance at meetings this year has not been as good as it might have been, but for some reason we have been unable to learn, there are some members who just do not seem to remember when we have a meeting.

The Annual Banquet of the Society was held at the Lenawee Hotel at Adrian, on the evening of Thursday December 15, 1927. The members and their wives attended to the number of 40. Our speaker was Dr. R. C. Longfellow of the Toledo Clinical Laboratory. He spoke on the subject of "Everyday Life in Egypt". He has spent several seasons in Egypt, Palestine and European countries. During one of his trips to Egypt he acted as House Physician to the Khedivial Hotel in Cairo, and it was largely from the experiences gained there that he told his story. He opened his talk by saying that he intended giving us some facts not written in the books, magazines, or steamship folders, and he certainly kept his promise. His description of the methods of the native physicians and healers was like turning back the pages into ancient history. He described the sanitary conditions and the progress that is being made to improve them. He advised anyone contemplating a trip to Cairo, and he said that applied to Egypt generally, to remember that there was no pure water, except in bottles, no pure milk, and no raw fruit or vegetables that were safe to eat. He also said that no one should ever go without more than enough money and then to be very careful what he did with it after he got there. Dr. Longfellow's talk was interesting and instructive and was enjoyed by all who were present, and the Society feels very grateful to him for coming to talk to us.

I am going to enclose with this letter an outline of our program for 1928 giving the names of the speakers where they are known.

The officers and members of the Lenawee County Medical Society wish you the best wishes of the season and hope that your coming year will be successful and pleasant.

Outline program of the Lenawee County Medical Society, 1928:

January—Society entertained by Dr. Esli T. Morden at the Adrian club. Election of officers

for 1928. Moving pictures and story of Canadian Hunting Trip, Dr. H. H. Hammel of Tecumseh.

February—"Management of Fractures of the Fore Arm and the Femur", Dr. Carl Badgley of Ann Arbor.

March—"Reminiscences of My Surgical Experience", Dr. Angus McLean of Detroit.

April—"Inflammation of the Kidney", Dr. James E. Davis of the Detroit College of Medicine and Surgery.

May—"Diseases of the Anus and Rectum", Dr. E. G. Martin of Detroit.

June—Annual Joint Meeting with Fulton County Ohio. "Malarial Treatment of Paresis." July or August—Annual Picnic.

September—"The Management of the Neurotic Woman". Speaker to be announced.

October—"Intestinal Obstruction", Dr. C. E. Boys of Kalamazoo.

November—"The Heart". Speaker to be announced.

December—Annual Banquet.

R. G. B. Marsh, Secretary.

INGHAM COUNTY

At the date of compiling this report (December 5, 1927) the Society has 83 members in good standing as compared to 89 members in 1926, and as compared to 96 members in 1925. In other words there has been a loss of 14 members in the last two years.

This loss is due to several conditions. The principal one of which is non-payment of dues. This may be due to the increase in dues or to a delinquency on the part of the Treasurer in the matter of collecting.

During the year we have acquired eight new members, four being elected and four being transferred from other Societies. Dr. McGillicuddy and Dr. Davenport were reinstated after one years leave of absence. Dr. L. Boyd and Dr. C. H. Benning left for other cities. We lost one member, Dr. W. H. Witter of Cleveland, Ohio, who died following a gall bladder operation.

We have at the time of this report nine active members not in good standing because of failure to pay their annual dues.

There were held during the year, 18 meetings of various types. The average attendance of these meetings was 34 as compared to 44 of last year, or 41 per cent as compared with 57 per cent last year. This may be due to several reasons. Principally to the fact that we have monthly staff meetings at both hospitals and I am inclined to feel that under our present local arrangements we are having too many meetings of not very prominent interest and it is therefore an impossibility to get much of an attendance. Then, too we have been hampered by holding several joint meetings with the hospital staff, with the American Chemist Society, with the Michigan Tuberculosis Association and Trudeau Society. All this has a tendency to blend our Society with various organizations and takes away any concentrated effort of the Society committee to serve as they should.

At one of our last meetings an out of town member who travels about 15 miles to attend, and who always is present was asked, what we could do to get other out of town members to attend more regularly. He answered by saying, "Get your own members out." This surely has

been our trouble during the past year. Unless every member resolves to attend meetings regularly our meetings will be poorly attended, because a Secretary can not call every member individually for every meeting and a postal card should be sufficient.

The big recommendation that our Secretary can make is to have a full attendance at every meeting or the Society will fail to serve its purpose.

In order to facilitate this work, I am going to recommend that the Society elect an individual Secretary, and an individual Treasurer so that the work of each office can be more efficiently carried out.

C. F. DeVries, Secretary.

The Annual Meeting of the Ingham County Medical Society was held at the Hotel Olds, December 6, 1927. The following officers were elected for the ensuing year:

President, B. Karl Brucker, Lansing.

Vice-President, L. C. Towne, Lansing.

Secretary, R. E. Goldner, Lansing.

Treasurer, Howard Wilson, Lansing.

The office of Secretary-Treasurer was divided. Heretofore it had been filled by one man.

Following the business meeting there was a banquet for the physicians and their wives. Speakers of the evening were the Rev. Father Gabriels and Dr. Guy Kiefer.

Our Society would appreciate this publication in the next issue of the "Journal".

R. E. Goldner, Secretary.

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

CLINICAL LABORATORY PROCEDURES — George L. Rohdenburg, M. D., Director of Laboratories, Lenox Hill Hospital, Misericordia Hospital, Beth David Hospital, New York. The Macmillan Company, New York, Publishers. Price \$2.25.

The present volume is a collection of laboratory methods which in the hands of the writer have shown their relative simplicity and clinical accuracy over a period of years of actual use. Where several methods are known or are in common use, that one has been arbitrarily selected which practical experience has indicated to be preferred. Some knowledge of laboratory procedure on the part of those using the volume is presupposed. An effort has been made to present concisely such procedures as are frequently undertaken in routine work.

THE DIABETIC LIFE—R. D. Laurence, Kings Hospital, London. Third edition. Price \$2.50. P. Blackstone Son & Co., Philadelphia.

An excellent guide for the general practitioner supplying well directed methods and measures.

DISEASES OF THE SKIN: Henry H. Hazen, M. D. Third edition, 248 illustrations, 572 pp. Price \$10.00. C. V. Mosby Co., St. Louis, Mo.

This third edition maintains the excellence of former editions with a revision of the text. As such then it is a very satisfactory diagnostic and treatment guide for the general practitioner.

THE JOURNAL

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XXVII

FEBRUARY, 1928

No. 2

ORIGINAL ARTICLES

AN OUTLINE OF THE MOST NOTABLE FACTS CONCERNING THE EVOLUTION OF GALL BLADDER SURGERY — REMARKS ON CHOLECYSTOMY WITHOUT DRAINAGE

HENRY J. VANDEN BERG, M.D., F.A.C.S.

GRAND RAPIDS, MICHIGAN

Although it was the latter part of the nineteenth century before much was done along the line of gall bladder surgery, there are some earlier attempts that are worthy of mention.

The earliest recorded work was experimental in nature by Ettmuller¹ in 1670, who practiced cholecystectomy on animals.

Jean Louis Petit² (1743, 184 years ago) was the first to systematically devise a method of operation upon the gall bladder. He limited his operations to cases where the diagnosis of adhesions could be made and operated thus in at least one case with success, in several sittings.*

"In the first part of this article the author described three cases in which a tumor of the gall bladder was opened in the supposition that it was an abscess, either puncture or incision being done. Death soon followed in the first two cases, but the third patient lived. The symptoms which preceded death were sharp pains, abdominal tension, hiccough, vomiting and other symptoms attributable to the presence of bile in the abdominal cavity. Consequently it is important not to open these tumors until after serious reflection. The fact that one patient recovered, however, shows that the operation is not necessarily fatal.

It must be conceded that if the two first patients died on account of the presence of bile in

the abdominal cavity, in the third patient there must have been some peculiar disposition which prevented the effusion of bile, for if the bile had entered the cavity she also would have died. In this case it was probable that the gall bladder was adherent to the peritoneum at the point at which the opening was made and consequently it is not dangerous to open the gall bladder. The difficulty is in determining whether or not adhesions are present. As inflammation is the principal cause of adhesions of these parts, it may be stated that adhesions are always formed when abdominal viscera become inflamed, especially when there are several attacks of inflammation at the same point as in the present case. In such cases the gall bladder can be opened without danger.

The presence of adhesions may also be determined by placing the patient on the left side with the thighs flexed on the abdomen. If the tumor is then pushed from side to side and remains immovable adhesions are present. If it is movable there are no adhesions. Also if there is swelling, edema or redness over the tumor it is probable that the tumor is adherent. If adhesions between the peritoneum and gall bladder can be determined, tumors of these parts can be opened without danger and surgery is hence enriched by two new operations—puncture and lithotomy. Simple puncture and withdrawal of bile is not sufficient when there are gall stones which may again cause retention. Puncture is to be done with a trocar, then while the bile is flowing a sound is to be inserted through the trocar and any stones present can be detected. If stones are found, an incision of sufficient size is made. The left index finger is then inserted into the gall bladder and an examination is made. The stones are removed by means of a special scoop and the usual dressing is applied."

Richter³, of Gottingen, in 1798 (129 years ago) was the first to attempt to

* The first systematically devised operation upon the gall bladder by Petit and all subsequent advances were steps of such importance in gall bladder surgery that it seemed to add to the interest of the paper to give excerpts of the original articles in which these operations were first described. The reasoning, discussions and deductions in all the papers are interesting. Dr. Sims' paper is particularly interesting from the standpoint of antiseptiss and technique as obtained in those days; also for its painstaking description of details.

establish adhesions between the gall bladder and the abdominal wall in order to attack it later. He proposed (in substance) making an opening down to the peritoneum immediately over the gall bladder, then by the application of a caustic, induce inflammation with resulting adhesion to the gall bladder. After several days the peritoneum and the gall bladder could be punctured by means of a trocar.

Diagnosis and surgical technique improved as the time went on, best exemplified in the writing of Carre⁴ (1833) of Paris, and Thudicum⁵ (1859) of London. However, for nearly a hundred years it remained the universal practice to establish adhesions between the peritoneum and the gall bladder, in one way or another, before opening it, if they did not already exist.

Cholecystotomy in one stage was first performed by Bobbs⁶ of America, in 1868 (59 years ago). The operation was undertaken for an abdominal tumor in the right mesogastrium, the nature of which was not determined before operation.

"The sac had the appearance externally of an hydatid, its walls of ordinary cuticle, smooth in its inner aspect, and were whitish and semi-pellucid. Pulling it downward, after being evacuated, brought into plain view the right lobe of the liver, to the lower surface of which it was attached by a broad linear base like the gall bladder. The finger introduced into the sac detected what seemed to be smaller sacculi, opening into the main one.

It had the appearance of an enlarged gall bladder, or an appendage to this, although its size, the clear serous character of its contents, and the thickness and semi-transparency of its walls, might justify some degree of doubt upon this subject. From its form, attachments, and solid accretions, one of which could be so distinctly felt in a diverticulum, but which I did not succeed in removing, seemed to mark its identity with the gall bladder, and deterred me from the excision of the sac, as I should otherwise have done. I, therefore, put a stitch in the cut lips of its walls and cut the ends closely. This step was suggested by the apprehension that if any portion of its solid contents should have been overlooked, their escape into the cavity of the abdomen would be prevented, and the belief that the sac, in the event of its refilling with fluid, would become adherent to the walls of the abdomen, and be within the reach of a trocar, and make it practicable to obliterate it by injection, if it became necessary.

It would have been gratifying to have determined the condition and relation of the parts more satisfactorily, but the adhesions existing, as the result of past peritoneal inflammation, rendered this impracticable, without increased hazard to the patient.

The wound was closed by sutures and adhesive plaster, no vessel requiring to be ligated, and 30 drops of laudanum given after the patient was placed in bed.

Careful examination of the solid concretions removed leaves no doubt of their being biliary calculi. They are irregularly spherical in shape, smooth on the surface, which is of a mahogany color, and polished. The interior is of a whitish yellow, striated and porous. They are of light specific gravity, and numbered some 40 or 50, the majority being of the size of small shot. When access to the enlargement was reached, the surrounding parts were so agglutinated by old adhesions as to prevent a satisfactory inspection of its deeper portion. After the sac was opened more space was obtained, and its attachment to the under surface of the liver could be both seen and felt, and had the appearance of an hypertrophied gall bladder. Its lower extremity projected about five inches from the free margin of the liver. The cystic duct was probably obliterated from irritation produced by these concretions, and the one felt at the extremity of the finger was probably lodged in one of the biliary ducts.

Various authors have reported cases of hypertrophy of the gall bladder, but I believe they have usually found traces of healthy or vitiated biliary matter in the fluid contained in the cysts. In this instance the fluid was perfectly pellucid and watery, the solid and coloring matters having either been appropriated by the concretions, or had become absorbed or diffused."

CHOLECYSTOSTOMY

There was some controversy as to the priority of performing a cholecystostomy. The operation was at least first reported by Dr. Marion Sims⁷ who, on April 18, 1878 (49 years ago) practiced with deliberate purpose, incision of the gall bladder and removed 60 odd stones and established a fistulous opening. The following discussion by Dr. Sims is interesting.

"The operation was performed under proper antiseptic precautions, with carbolic spray, and carbolic lotion for hands, sponges and instruments. It took an unusually long time (twenty-four minutes) to get the patient under the influence of the ether. An incision, three inches long, parallel with the linea alba, was made over the most prominent part of the tumor, about three inches to the right of the umbilicus. It was begun an inch above the level of the umbilicus, and extended two inches below it. The peritoneal membrane was soon reached, but was not opened till all the bleeding from divided vessels was controlled. As there was such a hemorrhagic tendency, this required six artery forceps on each side of the incision.

When the peritoneum was opened, several ounces of pinkish serum (perhaps six or eight ounces) were discharged. I am somewhat in doubt whether the pinkish color of the serum was due to the rupture of recent adhesions between the cyst and the parietal peritoneum, or to osmosis from the peritoneum, but I think it was from the latter cause; for I did not, by sense of touch, discover the adhesions, if any existed.

A Dieulafoy's trocar of the largest size was thrust into the tumor and 24 ounces of dark brown fluid withdrawn, which I supposed to be bile. As soon as the cyst was emptied it was hooked up with a tenaculum and pulled to the outer edge of the incision, where it was seized with forceps and drawn out for about two inches. It was held

there while the finger was passed into the peritoneal cavity, along its under and upper surfaces, when it was ascertained by its attachments to the liver, to be the gall bladder. Dr. Bremond, Dr. Pratt and myself each thoroughly explored the sac by touch, and satisfied ourselves that it was the gall bladder. This multiple manual investigation would have been unjustifiable and hazardous without antisepticism. The gall bladder was then incised, to the extent of about two inches, and was thoroughly cleaned out with sponge-probangs passed to the bottom of the sac, which, on measurement, was found to be eight inches deep. At first, there were removed about two ounces of a dark brown fluid, much thicker (containing more mucus) than that already drawn off; and then there were drawn out with the probang a half dozen or more gall stones. One probang after another was then passed in, and swept around, till 60 gall stones were removed. Having emptied the gall bladder, it now only remained to secure its open border to the upper angle of the abdominal incision to insure a fistulous outlet.

Although this case terminated fatally, I look upon it as a triumph for Listerism; for the post mortem examination proved that there was not the least trace of peritonitis or other untoward complication to be found as the direct result of the operation. The benefit of the operation was shown in the immediate relief of pain, itching, nausea, vomiting, and in the production of stools natural in color and odor. Death occurred, as it usually does in all such cases depending upon total occlusion of the bile ducts, from transudation of blood from the mucous surfaces, i.e., from passive internal hemorrhage, the result of the poisonous effects of the biliary salts on the blood.

I believe that this operation is unique. Is it justifiable? I think it is, because it is an imitation of the process adopted by nature in all cases in which recovery takes place. Death is absolutely certain in every case where gall ducts are mechanically obstructed, unless an outlet be obtained either into the alimentary canal or by a fistulous opening externally through the abdominal walls. All authors have advised against opening the gall bladder until nature had prepared the way by forming adhesions between it and the abdominal walls, or till this had been done artificially by caustic potash. But this case proved that it is not necessary to wait for the tedious efforts of nature, on the one hand, or to resort to the clumsy process of caustic, on the other. Dieulafoy's aspirator renders the diagnosis certain, and antisepticism renders the operation of cutting down to the dropsical gall bladder and establishing a fistulous opening quite as safe as to leave it to the slower process of nature. The propriety of the operation being established, we can hereafter resort to it at an earlier period, before the changes are effected in the blood by the bile-acids which lead to its extravasation from the mucous surfaces. The blood of our patient was already so changed, so impoverished by the toxic action of the bile, that the operation was nugatory in staying the fatal result. Fortunately for progress, the clinical history of the case and the post mortem examination establish beyond any question the safety of the operation per se.

Blodgett⁸ in a later paper claimed to have performed a similar operation in February of the preceding year. He ends his paper, which gives a rather indefinite

description of the operation, with the following paragraph:

"The exhaustive comments of Dr. Sims upon his own case are equally applicable to the one detailed above, in which the date of operation was more than two months earlier. Therefore, the credit, if there be any credit, of being the first surgeon to conceive and execute cholecystostomy, belongs not to Dr. Marion Sims."

CHOLECYSTECTOMY

The year 1882 marks the beginning of greatest activity in the evolution of gall bladder surgery. The dominating impulse is ascribed by many to Langenbuch⁹, a German surgeon, who demonstrated the feasibility of removing the gall bladder. He performed the operation for the first time on July 15, 1882, in Berlin, and cured his patient.

"The death of a patient and review of a prior case lead the author to the study of the question:

- 1st. Whether the removal of the gall bladder is physiologically permissible? and
- 2nd. If it is, is it surgically practicable?

The first question was the easier to answer. We know that elephants and horses do not possess this organ. Furthermore, regarding human beings, it was known that the congenital absence of the gall bladder had, as a rule, no probable influence upon normal life or its duration.

Physiologically, therefore, there was no contra-indication, and the chief problem lies in the technique of the operation.

The author performed a series of experiments on corpses and thereby came to the conclusion that of all the abdominal operations which demand laparotomy as a first step, extirpation of the gall bladder with prior ligature of the cystic duct is to be considered the least radical.

Operative technique with report of a successfully operated case follows:

The abdominal cavity is opened by means of a transverse incision through the integument of the right half of the abdomen. A longitudinal incision is made following the outer border of the rectus muscle. Both incisions are 10 to 15 cm. long, forming the letter 'T'. The gall bladder fastened to the lower surface of the liver lies free with its tip. The colon is pushed downward by means of the introduction of a large flat sponge, and with it the small intestines below the incised abdominal section. The somewhat forward bent right lobe of the liver is raised and thus the hepatoduodenal ligament is strained, so that it protrudes out of the depth and its margin may be held between the fingers of the left hand. In this fold are situated the large biliary ducts, and toward the middle line, the portal vessels. In order to separate the cystic duct, it is well to lay free the gall bladder. The bladder reduced continually

in size and finally goes over into the cystic duct. Around this a silk ligature is applied. Catgut is not suitable for this purpose. Only after these preparations can the removal of the gall bladder take place after prior tearing up of its peritoneal covering. This is accomplished partly by pulling and partly by carefully executed knife and scissors cuts. After this there follows the cutting through of the cystic duct this side of the ligature. In case the gall bladder is full, one can empty it by means of aspiration before its removal in order to prevent a flooding of the field of operation in consequence of possible rupture of or injury to the sac. With a suture this operation is ended. The theoretic results of the author's studies showed the justification and practicability of this operation. Soon he found occasion for practical application. A 43-year-old male was turned over to the author at the end of June. The operation was set for July 15. Extreme precautions were taken in order to assure sepsis.

The operation was carried out in exactly the manner stated. After the operation the patient suffered no pains and slept the following night very well.

July 16. Temperature and pulse normal. Patient is hungry.

July 17. No pains. Temperature and pulse normal. Liquid diet.

Patient left bed on July 27th and was discharged in early September.

The same year (1882) marked the birth of another operation."

Cholecystenterostomy, first performed by Von Winiwarter¹⁰ of Liege, although Nussbaum¹² had previously conceived the operation. The complex operation done by Von Winiwarter in six sittings under great difficulties which succeeded in spite of the really extraordinary conditions under which it was performed, does not resemble in the least modern cholecystenterostomy, which dates from the operation done by Kappeler¹² (1887) and by Monatyrski¹³ (1883).

The year 1884 saw the first attempt in surgical interference on the common duct. Choledochotomy conceived by Langenbuch¹⁴ (1884) defended theoretically by Parkes¹⁵ (1885) and Kocher¹⁶. The operation was practiced for the first time by Kummel¹⁷, following which Courvoisier¹⁸ performed the first operation with success.

Cholecystolithotripsy consists of crushing a stone in situ in the gall bladder or cystic duct with the fingers, or a forceps whose jaws are covered with rubber, tubing and working the pieces out into the duodenum, without opening the biliary tract. First done by Lawson Tait¹⁹, later by Courvoisier²⁰ and Mayo-Robson²¹.

Choledocholithotripsy consists of crushing an obstructing calculus in situ in the common duct without opening the common duct and working the pieces into the duodenum. First done by Langenbuch²² (1886). Courvoisier²³ did this operation

in the same year. The former worked out the pieces through the gall bladder which had been opened and the latter worked them down into the duodenum. The example of Courvoisier was followed by Crede²⁴, Kocher²⁵, and Mayo-Robson²⁶.

In the above outline the most notable fact is the rapidity with which gall bladder surgery developed after lying almost dormant until 1882.

In the early days of gall bladder surgery, only the most advanced conditions such as a tumor mass, the presence of jaundice, together with grave constitutional conditions, had to be present to justify an operation. The mortality naturally was high because the patients operated upon were near unto death because of grave complications. Moreover, the technique was crude compared with that of the present day. New operations developed, some of which quite soon became obsolete—cholecystolithotripsy—choledocholithotripsy. Diagnosis and surgical technique developed and progressed hand in hand. It was gradually learned that gall bladder disease could exist without the presence of stones. It took many years to bring into favor the general practice of removing the gall bladder. It was demonstrated that removal of the gall bladder did not produce any disturbance of function traceable to its absence, although it was understood that the gall bladder had function.

The question of cholecystostomy versus cholecystectomy still comes up occasionally, but the present conception generally held is that the gall bladder, if diseased, should be removed, unless there are some special reasons for not doing so, the most important of which are:

1. Very sick patients or senile patients in whom immediate relief is indicated;
2. Very acute or extensive process in which there may or may not be pus in, or around the gall bladder;
3. Constriction or narrowing of the common duct.

Removal of the gall bladder gets rid of the disease which drainage alone too often does not accomplish. The gall bladder always will be useful for drainage, but in many cases, where drainage is desired, it is better to remove the gall bladder and drain the common duct.

There has been great interest in determining the exact cause of gall bladder pathology, the source and route of infection, and gall stone formation. Different

theories have been in vogue during different periods. The humeral theory was the first. This was followed by the infectious theory which was supposed to be the last word. Ashoff, however, maintained all along that the so-called pure cholesterol stone may form in a non-infected gall bladder but, that its presence, by virtue of interfering with the drainage will be conducive to infection and subsequent formation of the ordinary gall stones.

Judd²⁷ in a recent article states that "The Etiology of Cholecystitis is not well understood and we have recently been confronted with the possibility that the cause may be in certain cases, chemical or metabolic." This contention is, I believe, sound. It is extremely interesting in this connection to refer to an article that appeared in the literature 67 years ago by Thudichum²⁸, a German physician practicing in London, who wrote the following:

"In thus acknowledging at the outset that the primary disease which causes gall stones is quite unknown, that it is not even ascertained whether this disorder is a local disease of the liver cells, or a decomposition of the bile, analogous to those decompositions of the urine which produce the uric calculus, or a general disorder of the blood, or of the portal blood in particular, I do not surrender all hope for a fair solution of the question in a comparatively short time. The study of the structure and composition of gall stones has already taught us much; and, so soon as the chemistry of the liver and bile shall be well understood, we shall be in a position to approach the problem from both sides during life and after death, by physiological research and experiment, as well as by the anatomical and chemical examination of the dead body."

This problem is yet far from being clear and it will probably be some time before all the factors pertaining thereto can be satisfactorily evaluated and placed in their proper sequence.

The development of gall bladder surgery has been the means of contributing very materially to the diagnosis of abdominal conditions in general. It was gradually learned, from measuring up the findings of the surgeon at operation, that acute indigestion, neuralgia of the stomach, acute gastritis, dyspepsia, and so on were caused by conditions outside of the stomach and in many instances by gall bladder pathology. Surgery has in this way contributed a great deal to medicine. Diagnosticians now attempt to diagnose early and mild gall bladder changes and urge the removal of a gall bladder before extension to vital organs occurs, especially to the contiguous ones—namely, the pancreas and liver, but also the heart, kidneys and in fact all the parenchymatous organs.

CHOLECYSTECTOMY WITHOUT DRAINAGE

Cholecystectomy without drainage has been practiced by some surgeons, but in most instances more or less interruptedly for the reason that this procedure has been attended by disappointments usually because of occasional flooding of the peritoneal cavity with bile. Despite these occasional accidents, the practice is coming more into vogue because it is based upon a sound surgical principle. It seems inconsistent to leave drainage after a clean cholecystectomy in view of closing the abdominal cavity without drainage after gastro-intestinal work in which there is infinitely more soiling. The objection to closing the abdomen without drainage in properly selected cases is, I believe, largely traditional, the same as obtained until recent years in relation to drainage after a simple appendectomy. Cholecystectomy without drainage can be done in well over 50 per cent of the cases. Obviously it should be limited to cases where there is no spillage and where the gall bladder can be removed sub-peritoneally. If the latter cannot be accomplished, there is liable to be escape of bile from the denuded liver surface which will require drainage. The majority of very acute cases should also be drained. The technique is, then, applicable for the most part to chronic and subacute cases. With the exception of one case, the writer has successfully practiced this method for several years. Two years ago on the fourth day after operation, up to which time the convalescence had been uneventful, (normal temperature and pulse) the patient was seized with a very severe sudden pain, such as obtains only upon the rupture of a hollow visceral organ with out-pouring of its contents. The diagnosis of giving way in some manner of the ligature of the cystic duct was made and a few hours later the patient was re-operated, with good recovery. Considerable bile stained fluid was found all through the abdominal cavity. It could not be determined whether the suture had given way or slipped off the stump, but there was leakage of bile from the cystic duct.

The experience just cited did not deter the author from continuing the practice, but a change in suture material and technique was immediately instituted. Instead of using a free-tie of simple catgut, chromic catgut is now used, and with a twice over or figure eight suture it is fixed with a needle to the neighboring tissue. The slow absorbing suture prevents too early

deterioration and the fixation overcomes the possibility of the ligature slipping off the stump. Cutting through the cystic duct by the suture has been mentioned as a cause of leakage, but I doubt if that condition really obtains. *The prevention of the accident under discussion is then, I believe, proper suture material and proper technique.*

The disadvantages attributed to the use of a soft rubber drain have, in my opinion, been over exaggerated, yet unless drainage is needed, it makes for nicer surgery to get along without it.

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MEDICAL TREATMENT OF PEPTIC ULCER

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On many occasions I have discussed this subject, and frequently before the Post-Graduate Conferences. It is in response to many requests that I am offering this article for publication. For many years I

have consistently followed the plan of treatment here outlined, and the very satisfactory results justify my presenting the plan for your consideration.

By no means has the last word in the problem of peptic ulcer been said. From research laboratories will come new knowledge of the cause and the course. There is much that is still argumentative, but much has already come from these laboratories, and the literature of recent years teems with valuable studies on the physiology of digestion and the pathological processes occurring in the stomach. Somehow these researches have not come, in a general way, to the attention of the clinician, and in the treatment of the patient with peptic ulcer advantage has not been taken of the valuable information available. I do not know of a class of patients treated more casually by the doctor than the average stomach case.

The ulcer patient is not, as a rule, given his chance to get well under medical treatment at a time when such treatment would offer the best opportunity for his cure. Operated on when the ulcer has reached the chronic stage, the surgeon all too often considers his job finished when the patient leaves the hospital. As I see it, the surgeon's job is the mechanical one of restoring function by mechanical means when the case has been permitted to go so far that serious deformities prevent recovery, or to interfere when serious complications threaten life. Hence this paper—an attempt to give the man in the field a somewhat cursory glance at the principles which should underlie the treatment of peptic ulcer—that the simple ulcer may be cured while it is still a simple ulcer, and the patient remain cured after treatment.

One of the first medical books to be printed and one which has passed through more editions than any other scientific treatise, is "De Re Medicina, written by Aurelius Cornelius Celsus, who lived in the reign of Tiberius Caesar. In this book you will find a very complete medico-dietetic scheme for the treatment of peptic ulcer, based on the removal or neutralization of the acid, and from this time on we have had innumerable advocates of this or that treatment, most of them lacking in any special originality, and few of them founded on a rational basis. In some instances the known facts concerned in the physiology of digestion, have been ignored, and such knowledge as the profession possessed in regard to the etiology and pathology of the disease, has been as little

considered. Unreasonable satisfaction came as a result of symptomatic improvement which all too frequently was most temporary in character. Most of these so-called cures had combined with a dietetic scheme, a period of rest in bed.

Now rest in bed, combined with a limitation in diet, if that diet is of a character which is at all reasonable, will give subjective relief, and a certain percentage of cures. It has been difficult to measure the exact percentage of cures. We have all been aware of the great frequency of recurrences, and the statistics of this or that scheme of procedure have often been under suspicion due to the uncertainty of the correctness of the diagnosis. Clinical evidence does not make a safe basis for statistics, and even with the X-ray one must often remain in doubt. Certainly one must recognize that there must be a period of ulceration before deformity exists,—a pre-ulcer stage,—but such a condition, certainly for statistical purposes, is not definitely diagnosable.

We have, until comparatively recently, looked upon peptic ulcer as a very distinctly localized disease. Since it is always found in the acid bathed portions of the stomach and duodenum, great emphasis has been placed upon the hydrochloric acid as an etiological factor. Tradition is strong, and the therapeutic procedures most generally used today continue to be based, in spite of researches to the contrary, on the theory that the acid excess in percentage, specifically acts as a sort of corrosive in the production of ulcer.

It may be accepted that the very beginning of an ulcer is a simple erosion which, in the presence of certain other factors, goes on to the more serious ulcer. We recognize the fact that autodigestion is involved in the production of the ulcer, and we cannot question the fact that hydrochloric acid plays a part in the pathogenesis. However, ulcer of the stomach is not etiologically dependent on the height, or if you will, the severity of the acid. Functional hyperacidity in itself will not produce an ulcer, and there is no evidence to show that the individual with functional hyperacidity is more likely to have an ulcer. The pain in peptic ulcer is not relative to the height of the acid. As a matter of fact only in about one-third of the cases of gastric ulcer are the titrations materially above normal, and the highest range of acid is likely to be found in a reflex condition such as the gallbladder. Neither are we willing to believe that an increase of

pepsin in the stomach contents of ulcer patients, as Gunzberg found, is of importance as an etiological factor.

Changes in chemism then, are not entitled to a predominant place as a cause. We admit only that in the production of peptic ulcer it is necessary that we have three things:—a damaged mucous membrane in the presence of hydrochloric acid, and pepsin in any amount which will permit digestion, and while these requirements are those usually found, there is reason to believe that bacteria in the wall may, under certain conditions, produce the phenomena in the absence of hydrochloric acid.

Of more importance than changes in chemism are the changes in the pyloric tone resulting in pyloric irritability and spasm in which phenomena the variation in acid may play a part. There is experimental evidence which indicates that the prevention of duodenal regurgitation of the bile and pancreatic juices may unfavorably influence the production, or at least the life history, of the ulcer. There is no doubt that the pain in peptic ulcer is dependent on the hyperactive pylorus, on the hypermotility of the stomach. Crohn and Reiss found,—and this is of common observation,—that the relief of symptoms depends upon the relief of pyloric spasms rather than upon the alterations of the acidity of the contents, but enough of this for the present. It will be considered later as a preliminary to the treatment.

I ask your acceptance now, of the statement that a peptic ulcer is, except in rare instances, a phenomenon occurring as a result of a general systemic fault, and that a permanent cure is dependent upon the cure or alleviation of that systemic fault, and is not to be considered from the standpoint of local damage done to the gastric mucosa.

Of this systemic fault it is agreed that infection, frequently from remote parts of the body, is of the greatest importance. Smithies' analysis of his own cases, and Friedenwald's study of a large number of cases, give practically the same percentage, 34. Other men approach about the same figures. Rosenow is convinced, from a large number of experiments, that ulcers are produced through bacterial selectivity, a blood borne streptococcus infection with special selectivity or affinity for the gastric wall.

The second most important systemic fault is arteriosclerosis which makes up some 20 to 25 per cent.

We have left then, syphilis as a factor

in say 8 per cent (Smithies), certain occupational poisons, certain injuries and the more vague endocrine and neurological disfunctions. At any rate it seems pretty certain that we can account pretty definitely for about three-fourths of the ulcer cases, and that the largest element in the causation of ulcer is infection, and the second is associated with the anatomical arrangement of the arteries of the stomach.

There are two anatomical conditions to be considered as important factors in the production of a local lesion due either to a systemic fault, or a diseased condition quite remote:

First, the recognition of the fact that the arteries of the submucosa both in the stomach and the duodenum, are practically terminal vessels giving a limited blood supply to this area. They are, in addition, surrounded by interlaying muscle bundles, and these muscle bundles contracting forcibly, tend to interfere with the circulation. Moreover these terminal vessels are subject to the same tendency to circulatory interference by reason of easy blocking, as by bacterial emboli or endarteritis, as are the terminal vessels in the brain or the kidney. As a matter of fact most ulcers originating in middle and late life are of arteriosclerotic origin. Berlet's recent study of the anatomical arrangement of the arteries of the stomach convinces him that arteries in the pyloric region are predisposed to circulatory disturbances, and are deficient in their ability to establish an adequate collateral circulation. He feels that he has developed facts which furnish anatomical proof of the origin of ulcers from infarction.

Second, the work of Heyd has shown the lymphatic interrelationship between the appendix, the biliary system and the peptic ulcer areas. The frequency with which one gets a history of appendicitis or a present appendicitis, associated with peptic ulcer, has long before now caused the clinician to believe that there is a distinct relationship. The characteristic seasonal reactivation of the chronic ulcer at a time of the year when acute infections are rife, is a clinical observation common to us all. The lighting up of a chronic ulcer in the individual patient following influenza is the experience of us all.

Before dismissing the question of etiology I would like to bring to your attention the interesting work on the Experimental Production of Peptic Ulcer by Local Anaphylaxis.

Shapiro and Ivy have succeeded in pro-

ducing typical ulcers in animals by the use of various antigens. In its application to man they reason in this way:

First, the patient frequently is held to suffer from a general susceptibility to gastric ulcer because the ulcers recur, extend and perhaps multiply. They appear in the absence of any demonstrable local cause.

Second, with acid playing on the entire mucosa, only a slight area ulcerates.

Third, the field of attack is almost exclusively localized to the pyloric antrum and the duodenal cap.

Fourth, the lesions are both acute and chronic.

They believe that the spontaneous production of ulcer by local anaphylaxis in man does occur, the specific protein from the food being rubbed into the gastric mucosa. A local reaction arises at the sight of this spontaneous specific injection just as it arises in a diagnostic skin test for protein sensitization, but the gastric intestinal mucosa reacts much more violently than the skin, and instead of a little red wheal, necrosis and an ulcer develop. The fundus of the stomach is comparatively atonic, so the opportunity for rubbing protein in is therefore slight. Localization of the lesion at the pyloric ring region is due to the special mechanical and chemical conditions that there exist. Beyond the duodenal cap tryptic digestion and alkaline reaction diminish or abolish the antigenic power of the protein, so it is in the pyloric ring region that the active protein can be readily rubbed into the mucosa on account of the high motility spasm and frequent traumatism of this region.

Chronicity is established by a repetition of local reactions until a fibrosis develops. Once a raw surface is made by an acute local anaphylactic reaction, digestion favors chronicity.

As I have suggested, there still remains much to be cleared up in this problem of peptic ulcer. There remains much that is controversial. It is quite evident that no therapeutic method, either surgical or medical, has yet been developed which has met with the approval of the profession. There probably is no method to be found which will give 100 per cent cures. There are cases which should be treated medically, and undoubtedly there are cases which should be treated surgically. The medical man who does not distinguish that case which is a proper case for medical treatment from the case which is frankly one that belongs to the surgeon, is doing a

great injustice to his patient. That surgeon who claims that all, or the majority of peptic ulcer cases, should be operated on, puts the patient's life, by that operation, to a hazard which his results in-no-wise justify.

Peptic ulcer is a very common disease. Most peptic ulcers are duodenal ulcers. There are nine times as many duodenal ulcers, provable by the X-ray, as stomach ulcers. It is said that between 1,200 and 1,500 duodenal ulcer cases pass through the Mayo Clinic every year, and that in only 37 per cent of these cases was the disease diagnosed before admission. When it is considered that the average duration of the symptoms of these patients was 9½ years, it looks as though somebody was falling down on the job. To allow these patients to drift along for years undiagnosed, is most regrettable. If diagnosed, to be content with the temporary relief obtained by alkalis and some kind of a diet, allowing the patient to await the coming of a pyloric stenosis, an hour glass stomach or a perforation, is indefensible. There can be no question that the earlier treatment is instituted for peptic ulcer the more certain is the cure. As Moynihan says, "It is a reproach to medicine that the surgeon should be compelled to operate so frequently for gastric and duodenal diseases." A firm believer in the medical treatment of peptic ulcer, I do not for one minute want you to think that I hold any unreasonable prejudice against surgery. I surmise that in my work, I decide upon surgical treatment in fully 10 per cent of my ulcer cases. The obstructive ulcer is likely to be, off-hand, a surgical case. That is not to say that I have not seen medical treatment cure cases in which the X-ray report showed an obstruction. One of my cases of last year had what seemed to be an obstructive duodenal ulcer. He opposed operation, and was put on a medical regime. The ulcer still shows. The obstruction has disappeared.

We are likely to make mistakes. The relief of the spasm and the inflammatory process may relieve the obstruction. Marked cicatrices and obstruction due to adhesions, will not disappear. One would, of course, operate on these cases showing repeated exacerbations in spite of thorough and complete medical management, those with repeated hemorrhages and those that are threatened with or have perforations. In addition, there will be some cases in which control of the patient can only be obtained through surgical intervention, or where the time element is of para-

mount importance. The question of operating on the gastric ulcer continues to be associated with the controversial question as to whether the gastric cancer is or is not formed on the ulcer base. I am inclined to take the position that it is likely that the gastric cancer begins as a cancer, but that clinically we are unable to distinguish between ulcer and cancer at that earlier stage. With the doubt in our mind, fully appreciating that the gastric ulcer heals more rapidly than the duodenal ulcer, we will tend to lean more toward surgery in all gastric ulcer cases.

As I look over the hospital statistics of operative cases for either duodenal or gastric ulcer I am impressed with the rather high operative mortality. Walter Bastedo says that even the simple gastro-enterostomy starts with a mortality of from 3 to 6 per cent, and I know from my own experience how frequently a patient with a recurrent ulcer following surgery, presents himself for treatment. Now medical failures to cure still leave the possibility of surgical intervention. One may fail in the medical treatment of peptic ulcer, though I contend that one does not fail in the properly chosen case very frequently, but if failure does occur one still has an arrow left in his quiver. I might go further than this for I am quite convinced that in the properly chosen case medical treatment will give a larger percentage of cures. It is interesting to know that whereas a survey of operative duodenal ulcer cases at the Mayo Clinic gave a history of a period of nine and one-half years since the symptoms first appeared, in a group of doctors who presented themselves for the same trouble, the history went back twelve years. It suggests that doctors themselves lean very definitely toward the safer, more pleasant, more conservative method.

All that has gone before is but a hasty resume of some of the factors involved in the problem, to the end that we may more intelligently treat the patient. Our immediate problem is to cure this ulcer, and the next, though larger problem, is to correct, so far as we may, systemic disturbances, the removal or alleviation of which will give a better chance for the ulcer to be cured and will prevent its return. It rarely happens that there is a return of symptoms due to breaking down of an ulcer which has been treated properly either by surgery or by medicine. The return of symptoms is usually due to the occurrence of a new ulcer, and the new ulcer comes because the conditions which gave rise to the

first ulcer have not been removed. This is certainly true of the duodenal ulcer, but Nicolayser has recently produced evidence to show that a chronic ulcer of the stomach is the same ulcer all the time. The general principle in its immediate treatment will be, first to restore normal response to food assimilation since disturbances of function prevent healing. This, as Bolton well points out, is difficult on account of chronic functional disturbances, insufficient and wrong food, nervous instability, bad habits. If the normal responses of the stomach to the stimulus of food can be restored and maintained, the majority of ulcers will heal.

The first step then in the treatment of the peptic ulcer case, is the removal of the cause.

Second, is the adoption of the surgical principle of rest to the part, bed rest, mental rest and muscle rest,—muscle rest not only of the skeletal muscles, but rest of the muscles of the stomach.

The distress of the peptic ulcer patient is due to variations in intragastric tension, to excessive motility, to pyloric spasms. Gastric function is so closely connected with the general nervous system through stomach you must have mental rest. Each you must have mental rest.

As I have earlier suggested, bed rest with any reasonable diet, will give a certain percentage of cures. Bed rest in the hospital, with an understanding physician in control, a physician who practices the art of medicine as well as the science of medicine, who has control of his patients and their confidence, who is not too busy to burden himself with details, will give results not to be obtained by the doctor who treats his patient rather casually with not overmuch confidence in the probable success of his treatment, and perhaps not much knowledge of his subject. As in the treatment of diabetes, success depends not only on attention to detail, but on the education of the patient. That there be full co-operation of the patient with his doctor, not only in the hospital but for many weeks thereafter, is essential. Hospitalization with either medical or surgical treatment, is but a step in the production of a permanent cure.

A proper diet is of great importance. The diet that I have now used for many years, followed difficulties in the use of the popular milk diet. Such success as I have had I attribute in no small part to the diet. Milk is not a liquid food. Milk is a solid food. Because it is a solid food, and be-

cause it is largely a protein and fat food, it leaves the stomach slowly. Raw cold milk produces curds rapidly and curds as large as a man's thumb, which may weigh as much as 15 grams. Boiled milk is better. Raw skimmed milk is particularly bad. Forty per cent cream does not curd easily. If you must use milk be sure that it is citrated. Milk, then, is not a desirable food for peptic ulcer in the early days of treatment.

A diet is unsatisfactory that causes disturbances of digestive function since such disturbances arrest healing. Our purpose is to prevent pyloric irritation just as much as we can, and we are dealing with a most irritable pylorus. We want to prevent pyloric spasm, pyloric hypertension, gastric and duodenal motility. The diet must be bland. It must be finely divided for the pylorus is selective and holds back the less perfectly divided foods. We must give the stomach rest, but the patient must not be starved. By the end of ten days the average patient should be well on the way to a maintenance diet. The P C and F must be reasonably well balanced. As soon as possible the minimum protein requirements must be satisfied, else we have great loss of strength. The healing of an ulcer cannot be expected to progress satisfactorily with the patient losing weight and strength and becoming more anemic every day. Moreover, the diet must be palatable. This is of much greater importance than is commonly appreciated. Carbohydrates are the foods par excellence since they leave the stomach rapidly, and cause little excitation of the digestive glands, warm foods, liquid foods to start with, sometimes necessarily preceded by a few days of glucose drip.

I am well satisfied with my results of treatment of peptic ulcer with this medical regime. Choosing my cases carefully, recurrences are rare. The average case will leave the hospital a few days before the planned four weeks has expired. I hold a brief for this diet as compared with the more generally used milk diet,—

First, because it is, I believe, more logical. By assisting motor rest, greater opportunity is given for the ulcer to heal.

Second, because the patient is more comfortable throughout the treatment. It is a real pleasure to treat these cases who, losing their pain and discomfort in the first few days, go on through a most comfortable convalescence.

Third, because it is more palatable.

Fourth, because feeding every two

hours, there is less annoyance to the patient, more opportunity given for rest, and less disturbance to hospital regime.

Fifth, because alkalines are rarely needed, and when used are never required in such doses as to make possible the serious reactions which sometimes follow large and frequent dosage. There is the real danger of alkalosis as has been pointed out by study at the Mayo Clinic and elsewhere, and this is especially true in the arterio sclerotic case. With the removal of the pyloric spasm, hypersecretion and the irritating influence of retained acid contents is infrequent, and my average patient will go through his entire hospitalization without any alkalines after the first few days.

Sixth, because gastric lavage is eliminated from the treatment. It has been my experience that where alkalines are used freely patients require frequent gastric lavage in order to make them comfortable. It is disagreeable, and I believe does harm.

Medicinally, I have occasion to use but few drugs. Every patient is placed upon tincture of belladonna or atropine on entrance. I may give some bromides. I may find occasion to use luminol. The bowels are kept open with oil of petrolatum with the occasional use of milk of magnesia at night. I follow Dr. Smithies' plan of keeping a Prietznits poultice on the abdomen rather constantly, and I find it of real advantage. From him I also learned to let my patients chew paraffin wax freely.

PREHISTORIC DISEASE*

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"Whilst the successful, nay, the competent practice of Medicine—an Art which includes that of Surgery—may be, and often is, compatible with ignorance of the History of Medicine, he is the best physician in the classical and fullest sense of the word who unites a mastery of his Art to an intimate acquaintance with the great historical doctrines and philosophies on which they are based."

—Crookshank in Custom's
Introduction to the History of Medicine.

Medical history may be studied from at least two somewhat different points of view. The usual method is to deal with personages whose researches and discov-

eries have resulted in the development of the art and later the science of medicine and prevention of disease. Most medical historical writing has concerned itself with the human factor. It is the other phase, namely, disease particularly in its prehistoric aspect, I wish to consider in this brief paper. Garrison states in a recent revision of his fascinating History of Medicine that the influence of disease itself upon the trend of human history in the past is still an unwritten chapter. Civilizations have come and gone and we have attributed their downfall to various causes, chiefly war and conquest, giving little thought to other factors such as disease, pestilence and bad sanitation. Disease may not have been the sole cause of the extinction of human races or of species lower in the stage of evolution, for the trilobite, one of the earliest forms of crustation, had become extinct before we have found any evidence of disease. Doubtless more or less sudden catastrophic changes in climate have resulted in extinction of animal life in certain parts of the world.

Disease in its primitive condition is understood broadly to be an antagonism between two forms of life. The presence for instance of two cells of Protozoa, if the result is injury to either, may be considered as illustrating our definition. Disease is not as old as life itself though bacteria may be. Disease has not been found earlier than the later Paleozoic period. The study of ancient or prehistoric disease is important, however, as the first chapter in the history of medicine. If the study of medical history is of consequence, as throwing light on the development of the healing art, the study of the subject of this paper which embodies collaboration of the pathologist and the paleontologist might eventually aid in the solution of some of our as yet unsolved medical problems.

Skeletal remains from the close of the Paleozoic period have been studied and it has been found that vertebrates from that time have been to a greater or less degree subject to various forms of disease. In other words from that geologic epoch there has been progressive increase in bacterial infection. Even the dinosaurs were not exempt for fractures have been found complicated with osteomyelitis and evidences of subsequent repair have been observed. True bone tumors or osteomata have been found in the Mesozoic period. These bone diseases have retained their characteristics for perhaps millions of years. Pathologic conditions in ancient vertebrates have been

* Read before the Maimonides Medical Society, Detroit, December 7, 1927.

NOTE: Maimonides was born at Cordova, Spain, in 1135, A.D. To his thirtieth year he had the choice of professing the faith of Islam or the alternative death of banishment. He spent a goodly portion of his early life in the study of medicine. Finally he located near Cairo, Egypt, where he won the favor of the sultan and was appointed court-physician. Maimonides was the author of a number of works on medical subjects. His death occurred in 1204, A.D.

found to resemble those of modern forms. Observations have of course been limited to tissues that have been capable of preservation for long periods of time. Bones have been studied chiefly. Soft tissues have become fossilized and thus yielded to study by the modern pathologist. Parenthetically, it might be said that such studies that have been made have been the result of the invasion of the field of the paleontologist by the pathologist and anatomist. Such names as Virchow, Ruffer, and in America, Moodie, are at once suggested. Skeletal remains particularly of the vertebral column with attached ribs have been found in a distorted or curved position suggesting that the animal must have died of some condition accompanied by marked muscular spasm. Large numbers of skeletons have been found in the position of opisthotonos, characteristic of neurotoxic disturbance. Our very earliest evidence of disease, however, consists of the action of early parasites on the shells of ancient animals.

The beginnings of disease as intimated are associated with bacterial life which co-existed with the higher forms of life. Bacteria have been found in spore form in thin sections made of Devonian rock. Osborne has stated that "a bacterialess ocean would soon be uninhabitable, both for plants and animals; conversely it is probable that bacteria-like organisms prepared both the earth and the ocean for the further evolution of plants and animals and that life passed through a very long bacterial stage." He goes on to say that in the origin of life, bacteria appear halfway between what he terms the chemical pre-cellular stages and the chemistry and definite cell structure of the lowest plants. They are recognized more by their chemical reaction than by their cell structure owing to their minute size and often invisibility. The lowest bacteria known as primitive feeders possessed the peculiar faculty of finding food and energy in a lifeless world deriving both directly and from inorganic chemical compounds. These so-called primitive feeders are classified among the nitrifying bacteria since they take up nitrogen from ammonia compounds. They are said to have abounded on the lifeless earth and to have prepared both the earth and waters, making them chemically suitable for the lowly forms of plant life.

From the point of geologic time, bacteria have been proven to be of great antiquity. Walcott announced in 1915 the discovery

of fossil bacteria found in a section of chlorophyll-bearing plants the age of which he estimated to be about 33,000,000 years.

The lowest bacteria, it will be seen, were not parasitic in character. The parasitic bacteria began with their symbiotic relations with other bacteria and finally extended to include all animal and plant life. It was not until bacteria took on their parasitic character that we have pathogenic forms. The pathogenic bacteria represent only a portion of bacterial flora. Moodie thinks that the coal or carboniferous period marked the beginning of bacterial disease as this geologic epoch witnessed the earliest widespread development of bacteria and fungi. "The first disease conditions preserved" says he, "are not the earliest manifestation of disease since disease is doubtless the result of long ages of struggle between two contending forces of nature." The early animals were presumed to be immune and it was not until the immunity began to weaken that disease gradually evolved. It was a comparatively unimportant matter for millions of years so far as animal life was concerned.

The sociologic aspects of disease have been recognized in the great organized effort for its control known as preventive medicine and sanitation, and almost within the memory of many still living in the recognition of a new state function, namely medical education. Disease prevention will doubtless engage the attention of both profession and laity in still greater degree as time goes on.

In consideration of primitive disease I shall also include such periods in the world's history as the ancient Egyptian even though we have as a part of written history Egypt's contribution to medical lore. Any reference made here will be to the objective study made by such men as Ruffer, a British trained physician of French extraction. Ruffer's work was done between the years 1909 and 1917, to the time of death, which was one of the unfortunate results of the war. In 1891 Ruffer became the first director of the British Institute of preventive medicine. Ill health prompted his resignation and subsequent residence in Egypt, where he later became professor of bacteriology in the Cairo Medical School, and from 1901 until his death, president of the Sanitary, Maritime and Quarantine Council of Egypt, a position which made possible his interesting studies on Paleopathology.

Ruffer invented the word "Paleopathology" to include studies on skeletal and other preserved remains of human and animal bodies. We may then define Paleopathology as the study of the evidences of injury and disease among ancient man and fossil animals.

Ruffer described his methods as follows: The mummy bandages and all extraneous material were removed and the part thoroughly washed. Deep incisions were made into the skin. The parts were then placed in a solution containing carbonate of soda 1 per cent and formalin 0.5 per cent and soaked for two days. The arteries were removed from the surrounding tissue and placed in glycerine to which a few drops of formalin were added. For microscopic examination small pieces of calcified artery were placed in alcohol containing nitric acid and after 24 hours the piece was washed in water, hardened, embedded in parafin and cut in the usual manner.

He and his co-workers studied Egyptian mummies particularly from the 18th to the 20th Dynasties, or from 1580 B. C. to 1090 B. C. Among the structures they were able to identify clearly were the glomeruli of the kidney, alveoli of the lung, coils of intestines, striated muscle. Some of the most notable findings were atheroma of the arteries, anthracosis, abscess of the kidney, pleural and peritoneal adhesions, vesicle and renal calculi. Bone findings include so-called rheumatoid or arthritic and tubercular bone disease. The most frequent bone disease was osteitis deformans and arthritis. On the whole prehistoric peoples were presumed to be free from rickets. In Egypt osteitis deformans was found in the predynastic periods (circa 3400 B. C.). Evidence of inflammation and new bone formation was found particularly in the lumbar vertebrae. No archaic man appears to have been exempt from spondylitic lesions. The teeth usually showed good preservation. Splints were used in the treatment of fractures from the 5th dynasty (2750 B. C.). Arteriosclerosis was discovered by Ruffer and his co-workers in a large number of cases, many of which showed the arteries like boney tubes. Syphilis has been reported by De Morgan to have occurred among the ancient Egyptians, but the evidence has been declared uncertain. Appendicitis in the early Egyptians has been observed by G. Elliott Smith who discovered appendiceal adhesions. Osteoporosis has been noted in early Egyptian skulls. Syphilis in ancient Egypt is still

unproven according to such authorities as Elliott Smith, Jones and Ruffer. From lesions on a prehistoric skull Fouquet thought he discovered a condition which suggested lues.

In certain parts of the United States are evidences in the shape of huge mounds that a race quite different from the Indian occupied the land. This prehistoric people, for want of a more accurate name, are known to us as "mound builders." Early explorers of the North American continent were unable to obtain any accurate information from the Indians concerning them. The mounds found along the Ohio river and elsewhere tell the only story we know. We conclude for obvious reasons that this extinct race unlike the Indian was static rather than nomadic in its mode of life. Means has made X-ray studies of the exhumed remains from the Ohio mounds. His radiographic study of the bones showed evidence of bone disease and fractures as well as spear and arrow wounds. Apart from fractures or bone trauma the diagnosis of bone disease by the X-rays depends upon variation in density, caused by disease. Bone tuberculosis, from the fact that it is manifest chiefly by decalcification, would be difficult or impossible to show except in Pott's disease where we would have a partial destruction of a vertebra. Means has been able to show evidence of Pott's disease. Bone syphilis is characterized by bone destruction followed by bone proliferation, or osteogenesis characteristic of Charcot arthropathies. The eburnation or hardening of the bone could well be preserved under favorable conditions over a long period of time. Means claims positive evidence of bone syphilis. His studies also revealed coxa vara in femurs which may have been due to rickets. Hypertrophic arthritis was found in many instances; arthritis deformans was also found as well as healed osteomyelitis.

Moodie studying the skeletal remains of mound-builders of the Mississippi Valley found many gross pathological changes such as injury with the formation of callous, complete ankylosis of humerus and ulna, periostitis, osteoperiostitis, osteitis deformans, fractured ribs and spondylitis deformans. No definite evidence of rickets was found.

The successor to the mound-builder in the possession of the North American continent, the Indian appears to have been a healthy specimen. He did not consider it a duty to care for the helpless, preferring that the principle of the "survival of the

fittest" should prevail unhindered. Moodie doubts the presence of syphilis among them. So free from disease were they that the introduction of disease coming with the white man had a virgin soil on which to work. As a result we have all but extinction of this rugged and picturesque race.

As for syphilis; a study of its later history and the development of diagnostic methods and treatment is not the purpose of this paper. Is syphilis a primitive disease? Volumes have been written on the subject without shedding any real light; syphilis has been described as the only known disease with a definite date. Those who make this claim fix the date of its introduction into Europe at 1493 A. D.; the event of the return of Columbus from his voyage of discovery of the new world. Sudhoff who is perhaps the greatest medical historian, as well as one of the most cautious, discredits all proffered evidence to this effect and declares that syphilis has a much earlier incidence. It is agreed, however, that between the years 1492 and 1494 A. D. an epidemic of syphilis spread over France, Spain, Italy, Switzerland and the countries bordering on the Rhine. Several American writers, notably Joseph Jones of New Orleans and Gustavus Bruhl of Cincinnati, concluded that syphilis existed in America in a remote period in the past; that it was pre-Columbian. Jones' opinion was based on the findings of bones in prehistoric burying grounds. Moodie, who has given the subject of paleopathology more attention than any other present day American writer, concludes that "It may be safely said that syphilis has not been definitely shown to exist anywhere in fossil or sub-fossil bones." So far as the evidence of prehistoric syphilis in North America we are forced to accept the Scotch verdict of "not proven." It is interesting to note here that the name "syphilis" was first introduced into medical literature by Fracastoro of Verona who published in 1530 a Latin poem bearing the title "Syphilis sive morbus gallicus."

Sudhoff thinks that the "proofs" of those who favor the American origin are not conclusive. The fact that it was not described as a distinct clinical entity before the end of the fifteenth century meant nothing inasmuch as "in the field of infectious diseases ancient medicine suffered from marked weakness of vision." According to the same writer it has not been definitely proven that syphilis existed in Ancient Greece and Rome. To quote from

Sudhoff, "The careful examination of the whole material on hand by Dr. Hrdlicka has completely dissipated the allusion of the existence of syphilis in the new world of pre-Columbian origin. On the contrary, the frightful frequency of syphilis in Indian graves in the seventeenth and eighteenth centuries seems to force the conclusion that the disease was brought to this untainted race by the Europeans." Direct proofs of the importation of syphilis from America in 1493 do not exist. He closes an interesting chapter with the statement that the "origin of syphilis from the knowledge which we today possess is as far removed as that of the origin of all other infectious diseases."

Among the most interesting of extinct civilizations from the viewpoint of paleopathology is the ancient Peruvian. They were the most isolated of all prehistoric peoples and developed a civilization which was perhaps more individual than any other; that is, least affected by outside influences. This fact makes the primitive surgery evolved by them of special interest to the medical profession. Of recent years the skeletal remains have been carefully studied, not only for evidence of disease, but for evidence of treatment as well. The residents in proximity to these old cemeteries have explored them in order to obtain rare specimens of pottery buried with the dead. In so doing the skeletal remains were also exhumed and left lying on the ground. So great was the despoilation that approximately 4800 crania and a correspondingly large quantity of other bones were available for examination. Large numbers of these burying grounds have been thus desecrated.

While extinct as a civilization, compared with the Piltdown man or the Heidelberg man, the Peruvian cannot be considered ancient. The Old Stone Age is not represented in the western hemisphere. The Paleolithic Age is presumed to have begun about 150,000 years ago. The Neolithic Age is placed at between 7000 to 3000 B. C. The Bronze Age was from 3000 to 500 B. C. The ancient Peruvian according to Moodie appears to have belonged to this stage of progress. The Iron Age is represented as from 500 B. C. to the present. Hrdlicka accumulated a number of Peruvian pathological skeletons at San Diego, California; somewhat earlier than 1915, the year of the Panama-California Exposition. This material dates from a period prior to 1532 A. D. Before the Spanish conquest of Peru the inhabitants

were as healthy for the most part as the North American Indian before the advent of the white settler. In discussing disease among the Peruvians, the term pre-historic means in reality pre-Columbian.

Of the vast quantity of material examined much light was shed on primitive surgery, particularly in the form of trepanations on the skull, which the investigators concluded without doubt to have been made entirely for surgical reasons and not manifestations of primitive religious belief. A large number of skulls were found with large bony tumors in the shape of hyperostosis. Osteomas of very hard bone about the external auditory meatus were found in a number of instances. Acromegaly is reported with an accompanying large sella turcica. Arthritis deformans of the pelvic bones was found. A disease characterized by swelling or enlargement of the nasal bones has been described; one skull which was probably pre-Columbian shows clearly the condition. Its prevalence among the Incas is probable from the number of specimens of pre-Columbian statuary showing modelings of lesions of disease. A most dreaded disease afflicting the Peruvians at the present time is known as Uta. It is ulcerative in character. While also modern, its antiquity is attested by lesions of the malady frequently pictured on ancient pottery of the Incas. Since the disease is limited in its action to the skin, flesh and cartilage, our presumption of its pre-historic incidence rests largely on the work of the pre-Columbian artist. Modeling and painting in clay appear to have been the chief mode of expression of the ancient Inca, and his handiwork which may be seen in some of our larger museums, shows consummate skill.

SUMMARY

1. Medical history may be studied from the viewpoint of disease as well as that of the Makers of Medicine. We have evidence that disease existed ages before we have any written records of it.

2. Skeletal remains from the close of the Paleozoic period to the present have been studied. Bone conditions of the remote pre-historic past resemble those known to the modern pathologist.

3. Bacteria are probably as old as animal life. Lowest of primitive feeders derived sustenance from inorganic chemical compounds.

4. Earliest animals were immune to disease which occurred only as immunity began to weaken.

5. Ruffler's study of paleopathology in connection with Egyptian mummies—his method of restoring tissues—pathological conditions found.

6. Means and Moodie study the remains of American mound-builders—origin of syphilis obscure—its American origin not proven. Disease among the Incas—evidence from exhumed skeletons and ornamented pottery.

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ARTIFICIAL ACTIVE IMMUNIZATION OF INFANTS AND YOUNG CHILDREN AGAINST TUBERCULOSIS*

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During the last few years of the 19th century, partial results were claimed in artificial immunity against tuberculosis. Such findings were reported by Trudeau, Dixon, de Schweinitz, Pearson and Gilliland in U. S. A., MacFadyean in England and Behring, Neufeld, Baumgarten and also Moeller and Friedman in Germany, using living attenuated organisms. The attenuation of the bacilli was produced by prolonged cultivation on artificial media or by other well known means.

In 1905, Trudeau vaccinated guinea pigs with the low virulent R 1 living bacilli (human culture—Trudeau) and another series with the same culture killed and showed that dead bacilli increase the animal's resistance to subsequent inoculation. Calmette, Guérin and Breton, in 1907, were convinced that dead bacilli produced some protection, as was Loeffler in 1913, Bessau in 1916, and I. Strauss in 1923, the latter working with rabbits, while Selter in 1924 and Dold in 1925 failed to get any results.

Trudeau showed that (1) dead T. B. bacilli increase, though to a very slight de-

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gree, the animal resistance to subsequent inoculation; (2) the living attenuated bacilli gives a stronger degree of immunity than the same bacillus killed by heat; (3) the degree of attenuation of the bacillus used in the vaccine bears a distinct relation to the degree of protection it affords in guinea pigs to subsequent inoculation with virulent human cultures. A culture still capable of producing a very small amount of cell destruction, and of spreading to the neighboring inguinal nodes, gives better protection than one which produces hardly any appreciable and purely localized tissue changes; (4) cultures derived from cold-blooded animals and which grow only at room temperature, have brought about no appreciable degree of immunity; (5) the chemical changes produced in killing the bacilli by heat in the first experiment cannot wholly explain the diminished protective power of the vaccination with dead bacilli, for the K 1—human bacilli (Koch) used in the second experiment, though they had not been killed by heat, failed to give as good protection as the R 1, which differed from it only in the degree of its virulence.

The evidence here presented would seem to be in keeping with what we know of the artificial immunizations. Toxin immunity, or immunity brought about with dead germs, is never as strong or as lasting as that produced through the medium of a living virus (passive and active immunity). Furthermore, the degree of the attenuation of the virus greatly influences the degree of immunity obtained.

In 1920 Petroff, using H 37 (Baldwin's human bacilli), grew them for 8 weeks on ordinary broth medium. The growth was then collected by filtration through paper, desiccated and then triturated in a mortar into a fine suspension with physiologic Na Cl solution. The suspension was standardized so that 1 C. C. contained 5 mg. of dry bacilli and this was put in small ampules and heated at 100 degrees C in a water bath for one hour, giving a positive reaction for 470 days. Other allergic reactions—pleural and peritoneal exudation and reaction in testis were also produced by these dead organisms.

Whole organisms do not diffuse as rapidly as an emulsion, the bacilli fragments being more rapidly absorbed in the latter. (Therefore, though both sensitize, the intact organisms result in sensitization of longer duration). Whichever method was used, only a partial success resulted from previous attempts in prophylactic immuni-

zation because of (a) too large of infecting material being used in testing acquired resistance and (b) the influence of intercurrent disease.

Ten virulent organisms can produce progressive disease in a guinea pig. As to the quantity of virus previously used, each animal received at least 80,000 bacilli, sufficient to infect 4,000 guinea pigs with double a lethal dose. As much as 200,000,000 (5 mgm.) has been injected in testing immunity. In experiments hitherto the large dose of infecting material therefore broke down the possibility of reasonable established resistance. Recovery from typhoid fever sets up an acquired immunity but who, having had this disease with its resulting immunity, "is willing to swallow a whole culture of an agar slant."

Pneumonia did not occur often in tuberculous guinea pigs. Sinusitis and infection of middle ear were found in control animals, inoculated with a fatal dose of bacilli, which did not develop tuberculosis. This explains the absence of tubercle disease in some of the controls.

Tuberculosis of the adult should be considered as a reinfection of a body already infected in early life and partially immunized following this primary infection. The extent of infection, including latent foci as shown by a positive Pirquet or Mantoux test, varies from 80 to 95% at the age of 21 years. In Detroit, taking a representative cross section area of 25,000 population, the positive skin tests for the school children, ages 5 to 15, averaged 36.91 being 55% in boys of 15. In Germany 60% school children are infected and about one person in every 250 has tubercle bacilli in his sputum. An intense initial infection, however, is a helpful thing because it furnishes a substantial protection against subsequent reinfection. Hence the great discrepancy between the incidence of infection and the incidence of disease, particularly in adults.

This reinfection may be endogenous or exogenous. As to adult pulmonary tuberculosis the profession is practically divided into two schools, that believing in the endogenous (the larger school), and that in the exogenous theory. The endogenous group claims disease results by bacillary metastasis from a primary focus in the body. Tubercle bacilli rest encapsulated in one or more lymph nodes for many years, the wall ruptures and bacilli and tissue products get into general or lymph circulation to lungs. Others that tubercle bacilli get into blood stream through flushing in

marked congestion of sites of previous non-clinical tuberculosis, bacilli becoming fixed in lungs. A bronchiogenic spread from the original focus can, of course, take place. The exogenous group believes there is a new infection by bacilli entering the body from without. Reinfection may take place from infancy up, but exogenous reinfection more frequently occurs from the 4th to the 20th years, according to Lawrason Brown. He claims X-ray studies show parenchymatous pulmonary tuberculosis by the 10th to 12th year, suggesting these may develop adult pulmonary tuberculosis from the 15th to 25th year. He is convinced that 20 to 40% of adult pulmonary tuberculosis is due to infection after puberty. Raw, too, is of the exogenous school. It is interesting here to note a practical application of the endogenous school in the Infants Clinic of Gratz. Infants with negative tuberculin reaction are placed in special rooms while those with positive reactions are left in the general wards, often along side open-tuberculosis patients.

It is indisputable that tuberculous infection in the adult can have an endogenous origin, shown by bacilli in the systemic circulation and the localization in certain organs. Bacilli in the eye for instance, can only be explained through blood conveyance. Extra pulmonary disease is rare in the adult, only 5.6% in 10,000 ambulatory cases by Ronzoni, an indisputable adult origin being susceptible of proof in only 2.7%.

In pulmonary tuberculosis the question is more intricate. There are two biological groups, (1) races free from tuberculous infection and hence virgin soil, (2) adults living in midst of endemic tuberculosis. In races free from tuberculous taint (as well as in the few adults free from tuberculous infection in endemic countries), when tuberculosis does occur it presents the characteristics of a primary infection. This is not concerned with the race, but because the body lacks protection against the infection. The infection depends on the quantity of bacilli concerned. Those that are isolated seem to be harmless, as shown by Calmette. The abundance of the microbes determines the entire mechanism of the infection and its consequences.

The so-called cure is not the same as in other infections, as the germ does not die. It usually remains encapsulated, often in calcified foci, but capable of reproducing itself and, experimentally, of reproducing

the disease. Previously, according to Calmette, experiments showed that immunity lasted only as long as the focus contained living bacilli, while clinically it remained entirely quiescent. If complete cure supervened a new infection occurred characteristically identical with that on virgin soil.

Baldwin and Gardner give an admirably worked out account of the microscopic evolution of tuberculous infection in the guinea pig's lung after inhalation. It seems that the regular event is for the first "crop" of tubercles to appear immediately beneath the pleura and that "shortly after the subpleural tubercles have reached the height of the degenerative stage, there appears a second generation of lesions in the depth of the lung, usually in the outer half." These latter tubercles are abortive, a consequence no doubt, of the tissue allergy occasioned by the first tubercles.

Both tissue allergy and immunity are attributes of animals with tubercle. The allergic reaction is set into play by the tissue contact of immune animals with dissociated tuberculo-protein or with tubercle bacilli, living or dead. Its characteristics are prompt appearance and vigorous course of a tissue response, marked by acute inflammation that is followed by an accelerated development of characteristic nodular tubercles. The inflammatory changes, consisting of hyperaemia, emigration of lymphocytes and occasionally polynuclear cells, engorgement of blood vessels, and finally the formation of avascular tubercles, are anatomical and mechanical defensive measures of the body. The lymphocytes are more concerned than antibodies not only by setting up mechanical barriers, but by their physiological action. If the allergic body is capable of mobilizing these forces and producing inflammatory changes around foci of reinfection more promptly and with an increased intensity, it has acquired a considerable degree of resistance to reinfections. The effect of these extraordinarily rapid and exaggerated reactions is to fix bacilli and thus impede their mobilization from the site of infection. There is thus a localization of fewer bacilli in the various tissues than after similar infection of non-immune animals. The visible ultimate consequence is that appearance of delayed, abortive or more chronic disease which answers to our representations or concepts of immunity.

It must be plain that endowed with such a capacity to fix bacilli, organs, which by nature are relatively permeable from a

lymphatic point of view may be converted, as the animals become immune and allergic, into organs in which tubercle bacilli in movement may be promptly arrested and retained. To all intents and purposes therefore, the immune guinea pig's lungs will be not unlike normal rabbit's lungs in their behavior toward incoming tubercle bacilli, while as rabbits also become immune, the native capacity of their lungs to arrest and hold bacilli will be magnified.

The tubercle is not such a highly specific structure as we might hastily assume. Monocytes are characteristic of the tissue reaction to typhoid and paratyphoid bacilli. The tubercle is partly reproduced when neutral foreign bodies lodge in tissues, by colon dysentery bacilli (Selter) and in the presence of animal parasites. The gathering of one type of cell is not in itself indicative of any formidable defense reaction. It is rather specific for the irritant set free though certain bacteria attract polymorphonuclear leucocytes while animal parasites bring together immense numbers of eosinophiles. Quantitative more than qualitative conditions should be investigated in the study of the focal reaction to tubercle bacilli.

Roemer was the first to demonstrate the allergizing effect of dead bacilli which was later corroborated by Baldwin, Krause and others. The tissues undergo acute inflammation (allergic reaction) at places where bacilli focalize in sufficient numbers. If the bacilli are numerous enough the animals will be made acutely, even fatally ill by the reinfection. But if they survive the illness which usually begins a few hours after reinfection, they manifest their immunity by long outliving normal animals similarly inoculated with tubercle bacilli as of a first infection or by displaying little if any, tuberculosis due to their reinfection, at a time when the originally normal controls will have extensive and thoroughly generalized disease. Rarely will lymph-node tuberculosis progress if a sufficient transmission of bacilli from peripheral points to it is not kept up.

Allergy and immunity to tuberculosis can be correlated at so many points that it is a fair inference that the one quality is a function of the other. There is much evidence to indicate that immunity is achieved through the tissue effects of allergy, as these are found to operate upon tubercle bacilli.

Allergy is a changeable property fluctuating not a little during the ordinary course of an experimental infection and

modifiable by numerous incidents, specific to the infection and otherwise. In general it rises with extension and increase of the infection and falls with the latter's subsidence, arrest and healing. It is usually stated that in terminal tuberculosis, meningitis, generalized miliary disease, and extreme tuberculosis cachexia, coincident with the general waning of the reactive powers of the body, tuberculo-allergy is abolished. Some writers, however, have never found tuberculous animals to be completely refractory allergically to tuberculin or tubercle bacilli. Moribund guinea pigs and others in wretched physical condition frequently fail to react to the ordinary applications of antigen; but as the latter are increased, such animals always yield some noticeable response to sufficient quantities. This experience is in accord with observations made on human patients by Happ and Casparis. Infants and children (they found) in the last phases of generalized miliary tuberculosis with and without meningitis and negative to von Pirquet tests, practically always reacted positively to high enough concentration of tuberculin injected intracutaneously.

The most that we can say therefore, is that tuberculosis itself, as it brings about marked exhaustion of the bodily forces, depresses allergy and also exhausts it—sometimes almost to the finishing point. It exercises the same effect though transitory and to a minor degree, during the few days of acute illness, which follows the experimental reinfection of animals. On the other hand, single artificial reinfections very promptly and markedly raise the waning allergy of an experimental animal with old healing tuberculosis.

Accordingly while tubercle bacilli in some unknown manner create the hypersensitive state, and serve to maintain it at a variable level, and with their proteins bring it into play by arousing the allergic reaction, tubercle bacilli and their proteins also desensitize or anergize tuberculous animals under the proper conditions of mass and time. It may be stated that in general the tissues of allergic animals are less hypersensitive, that is, less reactive to new contacts with specific antigen (tubercle bacilli and tuberculin), during that time in which the animals are undergoing allergic reactions of or above certain intensity. It is believed to be marked enough to make some impression on the bodily economy—enough to lead to dysfunction and constitutional illness.

Specific precipitation, agglutination,

complement binding, etc., are all transitorily depressed by repeated injection of antigen spaced properly, only to rise to higher levels than formerly after the "negative phase" is recovered from.

Tissue tuberculo-allergy is affected by infections other than tuberculosis. The desensitizing influence of measles has been recognized since the days of our first knowledge of allergy, when it was noted by Pirquet. At the time of the great influenza epidemic of 1918-19, Bloomfield and Mateer seized the opportunity to make Pirquet tests in 19 consecutive cases of influenza admitted to the wards of John Hopkins Hospital. Skin sensitiveness to tuberculin was absent in every case but one, both mild and severe, during the febrile stages. During convalescence reactivity returned in 89.4 per cent of the cases. The return of the maximum reactivity was gradual in most cases, as shown by successive tests.

The physiological disturbance of pregnancy is said to reduce the allergy of tuberculosis. Technical difficulties stand in the way of scientific demonstration of its relation to tuberculo-allergy. There is ample evidence that such a relationship exists. For instance, measles, influenza and pregnancy, which depress tuberculo-allergy, have been especially noticeable as activators of tuberculosis; that is, as presumptively reducing resistance to infection previously held better in check. As nearly as can be determined by experiment the conditions necessary for the initiation, intensification, diminution and termination of tuberculo-allergy and immunity appear to be the same. Such an association does not hold as between tuberculo-immunity and any other so-called "immune process,"—precipitation, agglutination, etc.

The relations of mass and time are of prime importance in arriving at any given effect. Considered purely by themselves, allergy and immunity respond to re-infection in two opposite ways, as factors of quantity and time of reinfection move toward one or the other of two ends of the scale. There is a dosage of reinfection and a spacing of intervals between reinfection, one of which is always to be correlated with the other, which are favorable for the highest development and increase of allergy and immunity. But there is also a dosage and a spacing which will depress and perhaps destroy each.

Phosphorus nitrogen and sulphur are found in tubercle bacilli. Oxidation and reduction changes are undoubtedly influenced

by presence of organic combinations containing these elements. Possibly in the future a chemical basis may result in standardization of tuberculin. A cold water extraction of tubercle bacilli after ether plasmolysis at ordinary temperatures, gives a water soluble protein representing 6 per cent of original weight of dry cell. If autoclaved before plasmolysis, however, practically no water soluble protein results. This 6 per cent factor is the most potent tuberculin thus far separated from the cell, although the fraction remaining behind retains a pronounced potency as a tuberculin.

It appears that specific intoxication is a potent factor in unfavorably influencing immunity. If that is so, reinfection influences allergy and releases intoxicating protein products, and intoxication, in turn, reacts back upon allergy and also influences immunity.

In 1906 Calmette supplied Raw with a culture of virulent bovine tubercle bacilli of the mesenteric glands of a cow. This he (Raw) has subcultured on glycerine potato and transferred to glycerine agar every month for 20 years, giving at present the 240th generation. Every year these bacilli were injected into animals with a view to testing their pathogenicity. Until 1913, that is the eighty-fourth generation, no change in virulence was noticed. After that time attenuation became marked, and in a series of animal inoculations of these bacilli in 1914 they were observed to be avirulent. By using these attenuated non-toxic and non-virulent dead cultures, immunization was produced in animals.

It is interesting to note that at the 15th year bovine cultures suddenly became discolored deep red (gradually fading away) while this color phenomenon did not occur in human or avian cultures of the same age.

The vaccine for children prepared from the attenuated cultures, destroyed by heat, is a bacillary emulsion containing all the products of the bacillus. Four hundred and twelve children 1½ to 14 years of age and directly exposed to tuberculosis, were given two injections of .006 mgm. There have been no ill effects in four years and no deaths. No local or general symptoms result from the vaccination.

Raw claims distinctly beneficial results with this vaccine which he gave to several adults with early pulmonary tuberculosis, involving one apex only and having acute symptoms as increased temperature, rapid pulse, etc. The injections were given weekly

for 12 doses, the series being repeated if necessary.

B. C. G. is now being used extensively in France and I found Dr. Calmette and his workers as enthusiastic as ever with their attenuated virulent bacilli vaccine. In parts of Switzerland too, it is administered by general practitioners. On the other hand, the one point that here and there results in criticism, is the possibility of the attenuation being lost in later life, and the organisms becoming virulent. Personally, though that risk is certainly present, I consider it very unlikely and if it did occur, the slowness of such mutation would result in body protection. Calmette's observation that von Pirquet tests remained negative in 80 per cent of the infants vaccinated by mouth is difficult to understand however from present views of allergy.

Prevention of tuberculosis is possible in two chief ways. The first, that of eliminating the possibility of infection, is ideal but impractical in our present civilization. Therefore, the second method, that of increasing resistance, principally remains.

Adult inhabitants of large cities are more protected against tuberculosis than rural dwellers. Tubercle infection of child is nature's protection against phthisis of adult, this process taking place with great sacrifices, however. It is necessary to immunize artificially before infection has had an opportunity to occur.

Koch considered immunizing possible only by injecting living organisms, he having failed with dead because he did not get a sufficiently large amount of the latter absorbed. The effect produced with dead bacilli cannot be compared quantitatively with protection afforded by infection because in the latter the vaccinating material increases.

Inoculating guinea pigs with dead bacilli of a young very virulent strain, Langer was able to get an average of practically double the length of life of control animals, and in one case three times as long.

Accordingly, infants and young children were then vaccinated with dead organisms. The vaccine used is composed of equally disseminated very young virulent bacilli, killed by heating at 100 degrees C. Allergy was produced more readily by such material than formerly. Using intracutaneous injections in infants, allergy resulted regularly, corresponding to tuberculin allergy. This artificially produced reaction remains for years.

Some three hundred children were immunized, allergy taking place in three to

five months, which therefore corresponds to the incubation period. The vaccine can be repeated in four weeks to accelerate sensitization. As previously response was found only in genuine infection, infection was thought necessary.

Two intracutaneous injections are given on external side of upper leg, 0.1 c.c. each or one intramuscularly of 0.2 cc. into gluteal muscle. A nodule results at each site of inoculation. This is obligatory, forming the primary tuberculosis focus, made up however of dead bacilli instead of living. (Sometimes a very slight ulceration of skin occurs, scarring after a few weeks, but much smaller than small-pox scars). Later tuberculin injections produce focal reactions in these nodules.

Among the infants vaccinated were 25 in Berlin, exposed to advanced open cases, and a further 25 in Charlottenburg. These 50, observed for three years, are all alive and healthy whereas ordinarily 20 to 30% would have died. This vaccine has been used by the Federal Board of Health at Berlin. Also at the Capitol's Zoo, all new monkeys are now inoculated with it.

Zadek and Meyer used Langer vaccine in 19 children, including infants. All were taken away from parents for three months till successfully vaccinated. These children were exposed to active tuberculosis for from one year to over two years. Some of them while exposed developed measles and whooping cough without breaking down with tubercle disease. There were no failures, five being free for two years and fourteen for one year.

CONCLUSIONS

Early childhood is the most vulnerable age to tuberculosis infection. Artificial protection of infants, by vaccination or otherwise, is the most efficacious means against tuberculous infection in adults. Prophylactic measures should take into account both endogenous and exogenous reinfection,

Anything we can do to cut off major sources of infection will but eliminate the overwhelming dose. Continuous exposure between mother and child serves only an evil purpose.

The fault with earlier experiments in immunization was in attempting to create an absolute immunity. This cannot be accomplished and is not necessary, there being only a few cases in which infection is massive.

The study of tuberculosis of the Orient leads to the suspicion that good hygiene,

however important and highly desired it may be, is of distinctly minor importance in comparison with an optimal tuberculization. In India 80% of children under five years have positive von Pirquets.

Raw vaccine is composed of a bacillary emulsion of entire bacillus products of very attenuated organisms, killed by heat. It is used not only for immunizing purposes in young children but definite though partial results are claimed in treatment.

Calmette vaccine in the writer's opinion, has shown its great value at the hands of very well qualified and experienced men and future results are looked forward to with great expectations.

Langer vaccine made of whole very young virulent bacilli, killed by heat, is very suitable for immunizing purposes in this country and I have no hesitation in strongly recommending its use very broadly. There is no apparent risk, present or future, connected with its application and results in Europe are entirely in its favor.

We are prepared to supply Langer vaccine, gratis, to physicians for use in suitable cases in exchange for records¹.

REFERENCES

1. Material for this paper has been taken freely from observations and experiments of Armstrong, Lawrason Brown, Bushnell, Calmette, Fischel, T. B. Johnson, Krause, Langer, Park, Petroff, Pinner, Raw, Ronzoni, Theobald Smith, Trudeau.

ESOPHAGEAL AND URETHRAL OBSTRUCTIONS IN MYXOEDEMA*

A CASE REPORT

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Since the introduction of basal metabolic determinations in clinical medicine, the recognition of myxoedema has become more common, especially in goitrous districts. The following case is reported because of the extremely unusual presenting symptoms, those of oesophageal and urethral obstruction. A survey of about one thousand references on the subject of myxoedema has failed to reveal a similar case. Considering what is known of the pathological changes in the tissues of the body, together with the fact that the symptoms were entirely relieved by proper medication, there can be no doubt as to the diagnosis.

A white American farmer, aged 58 years, was

admitted to the University Hospital Out Patient Department on January 3, 1927, complaining of vomiting and weakness. The symptoms had begun gradually ten months before with indigestion, constipation, vague abdominal pain and occasional vomiting immediately after meals. About a month before admission the vomiting had become daily, occurred particularly immediately after breakfast, and consisted of the food just eaten. Occasionally soft solid food eaten at the other meals would be retained. The patient had been drowsy for about one year and lately had been accused by neighbors of being intoxicated because of his staggering gait. For five months he had noticed swelling about the eyes and increasing difficulty in vision. His voice had become quite hoarse and he had had a chronic non-productive cough. He had been quite short of breath on slight exertion for seven months, although no edema of the ankles was noted. He had been troubled with sick headaches associated with constipation. During the winter, he had suffered considerably from cold, often remaining near the fire most of the day. He had noticed difficulty in urination for six months, consisting of incontinence, dribbling, and a small stream. His weight had increased gradually from 165 pounds two years before to 199 pounds on admission.

The positive physical findings included sparse, dry hair with some canities, marked edema about the eyes, nearly closing the palpebral fissures, the pupils being unequal, but reacting to light. The ophthalmoscopic examination (Dr. Parker) showed edema of the nerve heads and retinae. There was beginning consecutive optic atrophy. The pigment ring was almost completely obscured. The lamina cribrosa was absent. The veins were slightly engorged, especially the superior temporal. The arterial reflex stripe was slightly exaggerated and there was some irregularity in the calibre of the arteries. There was also marked increase in density of the periarterial sheaths and moderate arteriovenous compression. The macula was granular, no hemorrhages, the discs were more edematous than the retina. The intraocular tension was normal. The visual fields showed marked contraction of form but not of color. The ears showed bilateral nerve deafness. The mucous membranes were pale and there was a peculiar tan pallor of the face. The teeth were absent. The tongue was large and heavily coated. A teleoroentgenogram showed that the heart was enlarged to the left. The organ was sock-shaped and the Danzer ratio was 0.59. There was a prominent aortic knob. The electrocardiogram showed sinus bradycardia, a rate of 48, and inverted T waves. (Dr. Barker). The blood pressure was 110 systolic, 85 diastolic, and there was moderate thickening of the peripheral vessels. There were no organs palpable in the abdomen. The deep reflexes were present and equal but quite sluggish. The skin was dry and thick. The hair distribution was abundant and normal on the chest, axilla, pubis and limbs. Heberdon's nodes were present on both hands but the other joints were normal.

The urine was negative for albumin and sugar. No casts were found. The specific gravity was 1.030. The peripheral blood showed 88 per cent hemoglobin (Sahli); 3,900,000 red blood cells; 5,900 white blood cells, 58 per cent neutrophils, 9 per cent eosinophiles, 2 per cent basophiles, 31 per cent lymphocytes. The red blood cells were normal in appearance. The blood non-protein

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nitrogen was 40 mg. per 100 c. c. The Wassermann reaction was negative. The stool showed no occult blood or parasitic ova.

X-ray examination of the gastro-intestinal tract showed "a considerable dilatation of the lower half of the oesophagus with the appearance of constriction at the upper cardiac region. This was checked up with large bougies which conformed very well with the previous examination." "The exact nature of the constriction could not be stated from the X-ray standpoint." (Dr. Hickey).

The patient was admitted to the ward for oesophagoscopy. (Dr. Yates). "Cocain anaesthesia—oesophagoscope introduced through laryngoscope and passed through the oesophagus down into the stomach. Examination of the mucous membrane showed this to be intact throughout its entire length. No evidence of tumor mass was found at the cardiac end of the stomach. There were, however, folds of mucous membrane, apparently redundant tissue, near the cardiac end that folded up as a result of pushing the scope into the cardiac end of the stomach. This may account for the shadow in the X-ray plate."

Genito-urinary examination. (Dr. Cathcart):—

"External genitalia negative. Urine clear. Prostate of normal size and consistency. Impossible to pass No. 10 French bougie; Filiform passed with difficulty; impossible to pass No. 12 French La Porte."

Basal metabolic rate, on January 24, was minus 28 per cent. The pulse was 48. The patient refused to enter the hospital for treatment and was referred to his local physician with instructions to take two grains of desiccated thyroid daily and return in three weeks. On February 17, the patient returned to the clinic. "He is eating heavily and having no trouble swallowing. Dribbling of urine has stopped and urination seems normal. No shortness of breath. Thyroid grains $\frac{1}{2}$, t. i. d."

February 28th: Basal metabolism plus 1 per cent; pulse rate 70.

April 26th: Basal metabolism 9 per cent; pulse rate 55. The patient felt so well that he discontinued the medicine two weeks ago. He was advised to enter the hospital but refused. Desiccated thyroid, grain $\frac{1}{2}$ t. i. d.

October 17th: Electrocardiogram gave same findings as before, but the T waves were upright. The patient returned with gastro-intestinal symptoms and increased weight. He has not taken the medicine for two months. The patient was admitted to the ward for study. No return of dysphagia or dysuria. The blood pressure was 150/95. The peripheral blood showed 95 per cent hemoglobin (Sahli); red blood cells 4,100,000; eosinophiles 2 per cent. After two weeks of desiccated thyroid medication, the basal metabolism was plus 5 per cent, pulse rate 60; second determination—basal metabolism—7 per cent, pulse 52. There was no change in other findings. The weight was 196. The patient was discharged to the family physician, with instructions to take two grains of desiccated thyroid daily.

COMMENT

After the initial control of the symptoms, the history of relapses in these cases is characteristic and is due to the practice of discontinuing the use of desiccated thyroid on the patient's own initiative. The

advanced arteriosclerosis is characteristic of these cases and was well demonstrated in this case by the eye ground changes and the shape of the cardiac shadow. Eosinophilia and secondary anemia are often present. Huskiness of the voice and indistinct speech are often noted. However, in this case the oesophageal and urethral changes which disappeared under treatment make the case worthy of being placed on record.

BACTERIOPHAGE IN THE TREATMENT OF FURUNCULOSIS

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When the possibilities of bacteriophage in the realm of therapeutics were first visualized, the *modus operandi* was assumed to be lysis of the infecting organisms. Since the bacteriophage could literally dissolve bacteria in the test tube, and since its introduction into animal tissues was followed by no untoward symptoms, it was rightly concluded that certain types of infectious diseases might be benefited by its use. The proof that bacteriophagy essentially similar to that occurring in the test tube could go on in the body served to strengthen the theoretical basis for bacteriophage therapy. Early efforts in the use of bacteriophage as a therapeutic agent were largely confined to those diseases in which the lytic principle could be brought into direct contact with the bacteria. Dysentery, typhoid fever and urinary infections in particular received attention and a not inconsiderable degree of success has attended the use of bacteriophage.

Investigators in this field at first felt compelled to accomplish two things in order even to hope for successful results. It appeared necessary to obtain a bacteriophage of maximum lytic activity for the bacteria in question and it likewise seemed essential that the dose should be administered by the route best calculated to bring the bacteriophage into contact with the bacteria. Beckerich and Hauduroy², however, soon discovered that, in urinary infections, injections of the bacteriophage often gave better results than did bladder and kidney installations. D'Herelle³ confirmed these results and Bazy¹ and Zdan-sky⁴ showed that not only was it unnecessary that the bacterium be susceptible to the bacteriophage but that filtrates which

had been heated and in which the principle was no longer active remained potent therapeutic agents. An explanation for these occurrences follows:

Bacteriophage renders innocuous a living virulent culture of bacteria. Such changes as occur in a culture submitted to the action of the principle are but little known. We do not know whether the bacteria are killed or whether they merely become invisible, filterable forms. The evidence favors the first assumption. Whatever happens, it is practically certain that proteolysis does not occur and it is well known that such "dissolved" cultures are antigenic. They produce antibodies in the same way, or at least in the same sense, as do vaccines. The lysed cultures have the further property of greatly increasing the ability of white blood cells to ingest bacteria. In brief, a bacteriophage-lysed culture qualifies as a vaccine and in general fails to give reactions such as are produced when killed bacteria are injected. In view of these facts it is logical to assume that filtrates of such lysed cultures may supplant autogenous vaccines in the treatment of those infections in which inoculation has been the therapeutic measure employed. Bacteriophage has been used in this way for some time in several Michigan institutions and by a few physicians in private practice. The results obtained will be presented here.

Furunculosis in its chronic state is so widespread that it offers a particularly favorable field for investigation. Further, the use of autogenous vaccines has been a last resort in many stubborn cases. Again, while there are some who praise this particular method of treatment, physicians are frequently enough disappointed in the results obtained. A rather prolonged series of injections is required, attended with unpleasant, and at times, dangerous reactions. A bacteriophage capable of producing lysis of the majority of the strains of staphylococcus encountered was available. These facts made this infection particularly adaptable for an experiment of the nature contemplated and consequently work was undertaken; (1), to determine the value of bacteriophage in terminating chronic staphylococcus infections; (2), to study the extent and nature of the reactions encountered following injections of bacteriophage filtrates; and (3), to ascertain the relationship of the nature of the bacteria (susceptible of resistant to lysis) to the results obtained. Although about 200 treatment have been

undertaken to date, for various reasons only a fraction of this number can be presented here. It is obvious to the physician that there are numerous factors which enter into an undertaking of this kind which make the results subject to several interpretations. Nevertheless, such material as is available is presented in the hope that it will stimulate sufficient interest to provide further clinical material in order that the experiment may be continued.

The bacteriophage used was a poly-virulent strain of staphylo-bacteriophage which has produced lysis of 110 out of 150 strains of staphylococcus. Although considerable investigation was required before this bacteriophage could be prepared in quantities sufficient for use, the results have no immediate bearing upon the present problem and will be considered in another paper. Suffice it to say, that in all instances the filtrates used were prepared by the lysis of fairly heavy suspensions of staphylococcus cultures. Filtrates were made after 24 hours' contact of bacteriophage and bacterium and allowed to "ripen" for about two weeks before distribution. No preservative was added. Treatment was given, in most cases, on two successive days when 2.0cc of the filtrate was injected subcutaneously, the region varying and apparently having no significance. No further injections were necessary as a rule.

Reports with sufficient data to justify their use have been received covering 66 treatments. They might be classified in two groups. One consisted of 32 patients who had suffered with chronic furunculosis. Lesions in these cases had existed for not less than one month and, in many instances, had extended over many months. Reports of the other 34 treatments indicated that in a few cases the present lesion was the first. In the majority of cases, however, no statement was made as to the duration of the condition. Had no treatment been instituted, or had the usual surgical methods been applied, the conclusion that a fair percentage of this latter group of infections would have become chronic seems warranted. Considering again the entire 66 patients, one statement, based on the opinion of the physician giving the treatment, is certainly justified. With a single exception all patients treated showed marked improvement.

An analysis of the reports received yields much more information than is given in the preceding statement, however.

The group of 32 so-called chronic infections includes 26 patients whose treatment was given from six weeks to thirteen months previous to the report. There has not been a single recurrence in this group during the period of observation. Eighteen of these 26 patients have been under observation for more than six months. In three of the remaining six cases a single lesion occurred after the treatment. No further treatment was given, however, and no lesions have developed during the two months or more that have elapsed. In the other three cases a single lesion appeared after five to six weeks. A second treatment was given and the individuals have remained free of boils for six months or more.

In the group consisting of 33 individuals in whom the duration of the infection is unknown or recent, 25 have been free of boils during the period of observation. This period is six weeks to six months in eleven instances, six to thirteen months in fourteen instances. Five patients had a single recurrence and have remained free of boils for six weeks or more without further treatment. Three others had recurrences. Although the number of lesions and the time of occurrence was not recorded, the physician made the statement that the condition of the patient was much improved.

Efforts to determine the relationship of the character of the coccus to the results obtained were not particularly successful, owing to the fact that in the majority of instances the organism was susceptible. However, eight of the patients who have remained free of furuncles for six months or more were infected with definitely resistant forms of *Staphylococcus aureus*. The tentative conclusion seems warranted that the nature of the strain of the coccus with respect to its susceptibility to bacteriophage has no relation to the therapeutic results obtained.

One of the first questions asked by the physician who makes his initial bacteriophage inoculation refers to the possibility of reactions. Forty reports were received in which a statement was made regarding reaction. Eighteen inoculations were followed by no reaction at all. In the remained, "slight" reactions were recorded. These, for the most part, consisted of nothing more than local erythema, although slight pain in the inoculated area, malaise and headache were reported in some cases. Vomiting occurred in one in-

stance. There was no correlation between the results obtained and the reaction observed.

SUMMARY AND CONCLUSIONS

This paper is a preliminary report and is presented primarily for the purpose of bringing to the attention of physicians the fact that treatments of this nature are being carried out with undeniable success and with a minimum of inconvenience to the patient. To complete the data, and to establish this practice as a sound therapeutic measure, many more cases are needed. The laboratory of the Michigan Department of Health is prepared to furnish bacteriophage to physicians for such treatments on the condition that a culture from the lesion be sent to the laboratory and that a report of the results obtained be furnished when requested. A considerable number of treatments have been carried out by physicians in this state since the practice has been adopted of furnishing bacteriophage whenever autogenous vaccines were requested. Since February 1, 1927 no *staphylococcus* vaccine has been issued, yet in no case has a physician, although notified of the substitution of the bacteriophage for the vaccine, refused to accept it or requested vaccine after using the bacteriophage. Many other *staphylococcus* infections have been successfully treated and the results will be published whenever their number justifies such action.

To summarize the above results, it might be said that bacteriophage treatments of furunculosis in 66 cases have given 65 favorable results. In all but a few patients there have been no recurrences of lesions during a reasonable period of time. Such recurrences as have been reported have been slight or have yielded to a second treatment.

The nature of the infecting organism with regard to its susceptibility to bacteriophagy is not significant.

Reactions have been absent or slight in all cases reported.

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SPONTANEOUS RUPTURE OF DEEP EPIGASTRIC VEIN

T. P. WICKLIFFE, M.D.

LAKE LINDEN, MICHIGAN

CASE REPORT

This case report is submitted for its unusual interests, apparent rarity, and the difficulty of diagnosis because of its simulating an acute intra-abdominal condition.

Female patient, aged 63 years, married second time at age 61 years.

Family History: Unimportant, two sisters living, healthy; none dead. Two brothers living, healthy; one dead. Mother dead, age 23, child-birth. Father dead, age 73.

Personal History: Of no special significance, except a very early first marriage, at age 15, and her first child was born 11 months later at the age of 16 years old. She subsequently gave birth to nine children during the next 24 years. Oldest child 48, youngest 23, all living and healthy.

Usual childhood diseases, general health up to last three years has been good. No serious constitutional diseases. Prior to present illness, patient had consulted me several times during the past year at office for general malaise, constipation, anorexia at times, and other ills incident to beginning senile changes. At these examinations nothing of special significance was found. Kidneys were normal, blood pressure varied around 150 systolic and 90 diastolic. No evidence of any marked arteriosclerosis, or cardiac disease. Her general appearance would indicate a conclusion of good health for a person of her age, in spite of her complaint of weakness and her inability to do her house work without undue fatigue. I attributed part of her symptoms to the fact that she was a large woman, with a fat pendulous abdomen.

One week prior to her present acute illness she consulted me at the office for the usual complaints, with the additional complaint of dull pain across the abdomen, and slight nausea at times. This did not keep her from her usual household duties. On Saturday before her illness Sunday, she was at the office to consult me because of an increase of pain and discomfort in the abdomen. She said she could hardly make it to town and back, a walk of about 10 blocks, and had to stop and rest. I was out and did not see her.

Present Illness: On the following Sunday, March 6, 1927, I was called at 8:30 p. m. to see this patient at once, as she was in much pain. I found the patient propped up in bed, groaning, with her hand on her abdomen, and apparently in great pain. She was pale, the face anxious, pulse, 78, weak, but not thready, volume somewhat diminished, regular and rhythm normal. Temperature, 97 F., patient's skin was cold, clammy, and

feet cold. She was the picture of acute shock. Examination of abdomen, revealed a large, round, smooth well circumscribed mass in right side of abdomen, the size of large grape fruit, on liver with umbilicus, which was extremely painful and sensitive to the most delicate palpation. After a quarter of morphine was given, and patient was easier, palpation revealed that mass extended well into flank and toward the pubis. It was dull on percussion, was movable, position of patient did not change position of mass. Questioned as to length of time the mass had been in abdomen, patient said that she noticed some swelling about 3 p. m., and that it had been getting larger and more painful since, and that at 6 p. m. she called attention of her husband to the swelling and told him it was so painful he would have to get the doctor. He then waited two and one-half hours, before calling at which time I found the patient in her acute shocked condition. Patient had slight nausea, but no vomiting. No pain or tenderness over abdomen except directly over the mass.

Patient denied any history of any kind of injury to abdomen. No tumors or masses had been noticed before by patient or physician, in abdomen.

Pre-operative diagnosis of Ovarian tumor with twisted pedicle, was made and immediate operation performed.

Patient operated at 10 p. m.

Operation: Linea alba incision made and when sheath of right rectus was incised bright red and clotted blood greeted us. When the rectus was retracted laterally a large subrectus blood clot was found. About two litres of clotted blood removed. The clot had dissected its way between the fascis and peritoneum into right flank, and down toward the pubic, this being possible because of the large, fat, lax abdomen. Several active bleeding points—the deep epigastric vein) underneath the retracted right rectus muscle were ligated, and the muscle was sutured with locked stitch the length of incision, which controlled the bleeding. Two rubber tissue drains were used, one in right flank and one behind pubic. After 36 hours patient had very little drainage, and made an uneventful recovery.

CONCLUSIONS

It seems to me the important lesson to be learned from this case is that first, it is often impossible to make a correct diagnosis of an acute abdominal condition.

Second, when we attempt to arrive at a diagnosis of an acute abdomen, there are several conditions which may occur *extra* peritoneally that simulate intra-peritoneal conditions, and lastly, we are prone to overlook the fact that the abdominal wall itself is to be reckoned with as well as things beneath it.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner* • Edited by MARJORIE DELAVAN

Advance publication of sections of the new "Manual for Health Officers", begun in these columns last month, is continued below.

QUARANTINE

(a) *Definition.* For the purpose of these Rules and Regulations, "quarantine" shall mean the segregation of persons having or suspected of having any communicable disease in such a place and under such conditions as will prevent the direct or indirect conveyance of the infectious agent to the public. No person or thing is to enter or leave quarantined premises without permission of the local health officer.

(b) *Diseases to be quarantined.*

1. Diphtheria, Scarlet Fever, Smallpox, Poliomyelitis, Meningococcus Meningitis.

(c) *Requirements of Quarantined Premises* and the facilities necessary for the patient.

1. Quarantine can only be established in a dwelling or such parts of a dwelling as have facilities for *preparing food, washing clothes, and means of personal toilet.*

2. Under such circumstances, as approved by the Local Health Officer, any other rooms under the same roof not needed by the persons within the quarantine may be sealed off by a representative of the Local Health Officer, and used for other purposes, provided that entrance and exit can be had without entering the quarantined area.

3. A quarantine can only be established in quarters that have facilities for carrying on all the functions of life and any additional requirements of the sick person. Where such facilities do not exist, the Local Health Officer may remove the case to a proper place as authorized by law.

4. Appropriate notice of all quarantined areas shall be given the public by the Local Board of Health by means of placards and otherwise when deemed necessary.

5. No person or thing shall enter or leave a quarantine without specific permission of the Local Health Officer. The physicians in attendance upon the case are hereby granted this permission while car-

rying out their professional duties. Ministers of the Gospel may be granted this permission by the Local Board of Health.

(d) *Privileges of persons living in quarantined premises:*

1. Quarantined adults not ill with the disease may go into the yard surrounding the house for the purpose of hanging out properly disinfected clothes, getting coal and carrying out ashes, provided there is no other person in the yard at the time.

General Provisions Governing Quarantined Premises:

1. Return to school after living in quarantine: All school children and adults whether they have been sick or well, shall be excluded from school and all other places where they will have similar contact with groups of children, for a period of seven days after they leave the premises that have been quarantined; except that persons not known to be immune to smallpox who have been in an area quarantined for smallpox, shall be placed in isolation for seventeen days after leaving the quarantine.

2. Certain diseases on a dairy farm: As long as there is a case of typhoid, paratyphoid, cholera, dysentery (amoebic or bacillary), septic sore throat, or any quarantinable disease on a farm, no dairy products of any kind shall be sold or removed from such dairy farm, except upon the written order of the local health officer after approval of the State Health Commissioner.

3. Moving a quarantined person: This is forbidden by the general provision that "no person or thing shall enter or leave quarantined premises." When it is for the benefit of the patient or the public health, removal of a patient to an Isolation Hospital is hereby authorized after notification has been given to the hospital and to the local health officer.

4. Milk bottles from quarantined premises and from premises where there are cases of typhoid, paratyphoid, cholera, dysentery and septic sore throat:

(a) Milk bottles, milk pails, or food containers of any sort shall never be allowed to leave the premises during the quarantine period.

(b) When milk bottles, milk pails, or

food containers are brought into these premises, they must be allowed to collect during the entire period of the illness or of the quarantine.

(c) After the quarantine is terminated or the cases of the other specified diseases have recovered, all these milk bottles, milk pails, and food containers shall be thoroughly disinfected by being completely immersed in boiling water for fifteen minutes.

(d) It is recommended that a pitcher or other suitable container be placed outside the door of the premises and that the milkman pour the milk into it, and carry the bottle away immediately.

5. When approved by the local health officer, a nurse may enter and leave quarantined premises to render nursing service by the hour.

6. When approved by the local health officer, a nurse employed for the professional care of a patient with a contagious disease, may be released from the quarantine one day each week, after the first week of the quarantine.

Release of persons before the termination of quarantine:

1. The patient—never without the written permission of the State Commissioner of Health, except for removal to hospital.

2. Adults—may be immunized, instructed, disinfected, and released to live elsewhere on such conditions as are provided for each quarantinable disease.

3. Immune children—same as adults.

4. Children of school age, or less than school age who are not known to be immune as defined in these rules and regulations may be released only to be placed in an isolation in another home. Children of school age who have been placed in such an isolation may be released from this isolation after seven days, except that if the disease is smallpox, the isolation of the susceptible exposed person shall be for seventeen days. A school child thus isolated may then return to school.

Termination of Quarantine. Quarantine shall not be terminated until:

1. The minimum period specified for each quarantinable disease has elapsed, and

2. The specific clinical or laboratory observations required by these rules and regulations shall have been made and found to indicate that the patient is not in an infectious state.

These observations are:

(a) Diphtheria — Two consecutive negative cultures from the nose and throat, taken at intervals of twenty-four hours, the first one not to be taken earlier than the ninth day of the quarantine.

(b) Scarlet Fever—Cessation of fever and all abnormal discharges from the ears, nose, or broken down glands.

(c) Smallpox — Complete return of continuity of the skin over the lesions.

(d) Poliomyelitis—Seven days of normal temperature.

(e) Meningococcus Meningitis—Seven days of normal temperature.

ISOLATION

(a) *Definition.* For the purpose of these rules and regulations "Isolation" shall mean that the patient with certain communicable diseases shall:

1. Be excluded from school and all public gatherings.

2. Not leave the residence except in the presence of an adult and then shall not leave the yard.

3. Not come in contact directly nor indirectly with any children not living in the same household.

If the provisions of the "Isolation" are not maintained by the patient the local health officer shall establish a quarantine about the case.

During the period of "Isolation" in a home, children of school age not belonging to this home who enter the "Isolation," must be isolated in their own home for the incubation period of the disease.

RADIOACTIVITY IN MICHIGAN WATERS

Every natural water is more or less radioactive and the presence of a small amount of radioactive material in a water does not set it apart from other natural waters.

Studies have been made of this characteristic of waters for the purpose of determining whether or not any curative effects can be derived from the radioactivity present. The majority of the work has been done in Europe, particularly in Germany. The United States Geological survey has done most of the work in this country.

The results of radioactivity determinations are reported in "millimicrocuries." This unit corresponds to the radioactivity produced by one-billionth gram of radium.

Most waters examined have been found

to contain less than 8.0 millimicrocuries per liter. From the results obtained at Washington, it seems that no curative effects can be obtained with an activity less than twenty millimicrocuries per liter. This was considered low as the medicinal dose calls for 500 millimicrocuries.

It is a question, however, what the minimum dose may be. Possibly there is an accumulative benefit derived from the use of radioactive waters, just as it has been concluded small quantities of iodine in water, much lower in fact than a medicinal dose, have a definite relation to the goiter incidence.

An outfit for determining radioactivity has been set up in the Michigan Department of Health Laboratory. Whereas the operation of this outfit is complicated and requires considerable practice, some work has been done on a few of the Michigan municipal waters. Some of these waters have been found to contain an appreciable amount of radioactivity.—M. H. B.

DR. KAHN INVITED TO ATTEND LEAGUE OF NATIONS
HEALTH CONFERENCE

Dr. R. L. Kahn, Immunologist of the Bureau of Laboratories, Michigan Department of Health, has recently been invited by the Health Committee of the League of Nations to attend a serological conference extending from May until July at Copenhagen, Denmark.

The following five serum reactions for syphilis will be considered at this conference: The Kahn, Sach-Georgi, Meinicke, Sigma and Vernes. It is planned to have the authors of these tests give discussions and demonstrations of their own methods. This, it is believed, will attract serologists from all over the world, since they will have an opportunity to observe the technic of each method as carried out by its author. There will also be reported at this conference results of comparative studies with the different methods carried out by Dr. Harrison of the Health Ministry, London; Dr. Hirszfeld of the State Health Institute, Warsaw; Dr. Otto of the Robert Koch Institute, Berlin, and by others.

The Kahn test is the only method which does not require incubation and is generally acknowledged to possess a number of important practical features. It is the standard method for the serum diagnosis of syphilis in the laboratories of the U. S. Navy; the state laboratories of Michigan, Illinois and West Virginia Departments of Health; in the Provincial Laboratory of

Nova Scotia; in the City Health Department Laboratories of Detroit, St. Louis and Memphis, and in numerous other laboratories in this country and abroad.

VISITORS

Dr. Frances Rothert, who is conducting a Maternal Mortality Survey in Kentucky, visited the Bureau of Child Hygiene and Public Health Nursing recently. Dr. Rothert is to start a similar survey in Wisconsin, Minnesota, Oregon and California, and will then resume her study of Kentucky maternal deaths. All of the above mentioned states will include in their study maternal deaths from January, 1927, to January, 1929.

VISITS OF ENGINEERS DURING THE
MONTH OF NOVEMBER, 1927

Inspections of Railroad Water Supplies:
Total 16.

Adrian	Port Austin
Bessemer	Powers (2)
Cheboygan	Saginaw
Mackinaw City	Thomaston
Manistique (2)	Wakefield
Marquette	Watersmeet (2)
Monroe	

Inspections and Conferences, Sewage
and Sewage Disposal: Total 50.

Allegan	Howell (2)
Birmingham	Lapeer
Cadillac (2)	Macomb Co.
Croswell (2)	Marine City
Dearborn	Muskegon (3)
Durand	Muskegon Hts. (2)
E. Grand Rapids (2)	Nine Mile Road
Eloise (2)	Northville (2)
Flint (2)	Plymouth (2)
Fordson (2)	Pontiac (2)
Fremont (2)	Romeo (2)
Imlay City	Royal Oak (2)
Holland (6)	Sparta
Lansing	Zeeland (2)

Inspections and Conferences, Water
Supplies: Total 112.

Bellevue	Okemos
Dansville (6)	Onondaga (3)
East Lansing	Perry (2)
Eaton Rapids (3)	Plymouth
Eden	South Haven (2)
Elsie (2)	Stockbridge (13)
Holt (2)	St. Johns
Mason (18)	Utica
Leslie (11)	Webberville (8)
Lansing (16)	Williamston (15)
Middleville (3)	Wind Lake Shores

Inspections and Conferences, Stream
Pollution: Total 10.

Grand Rapids (3)	Lansing
Kent City (2)	Trenton (3)
Lake Odessa	

Inspections and Conferences, Swimming Pools: Total 19.

Albion	Grosse Pointe (4)
Ann Arbor	Jackson (6)
Battle Creek (2)	River Rouge
Cadillac (2)	Wyandotte
Detroit	

Inspections and Conferences, Miscellaneous 3.

Jackson, Plumbing
Kalamazoo (2) Fairmont Hospital Enlargement.

VISITS OF ENGINEERS DURING THE MONTH OF DECEMBER, 1927

Inspections of Railroad Water Supplies: Total 27.

Bad Axe (2)	Grand Rapids (4)
Baldwin	Hartford
Bay City	Kalamazoo (5)
Cadillac (3)	Owosso (2)
Edmore	Paw Paw
Flint	Petoskey
Grand Haven	St. Joseph (2)
Vassar	

Inspection and Conferences, Sewerage and Sewage Disposal: Total 17.

East Grand Rapids	Plainwell
Ferndale	Pontiac
Grand Rapids (3)	Rochester (2)
Hamtramck	South Haven
Keego Harbor	Sparta
Lapeer	Trenton (3)

Inspections and Conferences, Water Supplies: Total 7.

Muskegon	North Muskegon (2)
Pontiac (4)	

Inspections and Conferences, Stream Pollution: Total 8.

Alma	Lansing
Bad Axe	Saginaw
Bay City (3)	St. Louis

Inspections and Conferences, Swimming Pools: Total 7.

East Lansing	Highland Park
Hamtramck	Mt. Clemens
Lansing	Mt. Pleasant
Pontiac	

Inspections and Conferences, Miscellaneous: Total 13.

Bunker Hill, School Water Supply (2).
Grand Rapids, Proposed School Site.
Interlochen, Resort Sanitation.
Kalamazoo, Alterations at Fairmount Hospital.
Keego Harbor, Drainage.
Lansing, Teaching Public Health.
Lansing, Plumbing Inspection.
Lansing, Valley Farm School, Water Supply.
Plymouth, Horse Barn Nuisance.
Pontiac, Keego Drain.
Owosso, Cross Connection.
Roadside Water Survey.

Institutional Inspections:

Genesee County Infirmary Sewage Disposal.

Inspection of School Wells:

Thirty-two samples were collected from school wells in Clinton County, during December.

PREVALENCE OF DISEASE

December Report				
Cases Reported				
	November 1927	December 1927	December 1926	Av. 5 Years
Pneumonia	361	469	523	546
Tuberculosis	453	426	297	377
Typhoid Fever	62	49	24	63
Diphtheria	496	460	592	713
Whooping Cough	389	444	502	484
Scarlet Fever	815	1,020	1,224	1,321
Measles	526	1,212	413	892
Smallpox	72	144	79	174
Meningitis	12	12	7	10
Poliomyelitis	34	16	5	5
Syphilis	1,099	924	1,058	1,007
Gonorrhea	725	654	772	764
Chancroid	14	4	3	8

CONDENSED MONTHLY REPORTS

Lansing Laboratory, Michigan Department of Health

December, 1927				
	+	—	+—	Total
Throat Swabs for Diphtheria				948
Diagnosis	20	247		
Release	38	107		
Carrier	18	505		
Virulence	6	7		
Throat Swabs for Hemolytic Streptococci				790
Diagnosis	24	243		
Carrier	8	515		
Throat Swabs for Vincent's	30	237		267
Syphilis				6840
Wassermann	879	1		
Kahn	879	5926	34	
Darkfield				
Examination for Gonococci	165	1166		1331
B. Tuberculosis				375
Sputum	58	288		
Animal Inoculations		30		
Typhoid				139
Feces	5	51		
Urine		17		
Blood Cultures	3	28		
Widals	5	30		
B. Abortus	1	37		38
Dysentery				24
Intestinal Parasites				22
Transudates and Exudates				179
Blood Examination (not classified)				150
Urine Examinations (not classified)				297
Water and Sewage Examinations				410
Milk Examinations				76
Toxicological Examinations				7
Autogenous Vaccines				6
Supplementary Examinations				160
Unclassified Examinations				539
Total for the Month				12599
Cumulative Total (fiscal year)				73942
Increase over this month last year				518
Outfits Mailed Out				29179
Media Manufactured, c.c.				288060
Antitoxin Distributed, units				29167000
Toxin Antitoxin Distributed, c.c.				29540
Typhoid Vaccine Distributed, c.c.				2350
Silver Nitrate Ampules Distributed				3472
Examinations Made by the Houghton Laboratory				1573
Examinations Made by Grand Rapids Laboratory				6604

Minutes of the Mid-Winter Session of the Council of the Mich. State Medical Society

Held in Detroit, January 11, 1928

The regular mid-winter session of the Council of the Michigan State Medical Society was held in Detroit, January 11, 1928, at the Book-Cadillac hotel.

1. The meeting was called to order by the Vice-Chairman of the Council, Dr. B. R. Corbus, in the absence of the Chairman, Dr. R. C. Stone.

Present: J. Hamilton Charters, B. F. Green, C. E. Boys, B. R. Corbus, Henry Cook, T. F. Heavenrich, Julius Powers, O. L. Ricker, Paul R. Urmston, Geo. L. Fe Fevre, Richard Burke, B. H. Van Leuven, J. D. Bruce; H. E. Randall, President; and F. C. Warnshuis, Secretary-Editor.

2. The minutes of the Executive Committee as published in the Journal were approved and made part of the record of the Council upon motion of Boys-Green.

3. The Chairman of the Medical Legal Committee, Dr. F. B. Tibbals, submitted the following as his Annual Report, which was referred to the Finance and Committee on County Societies.

MEDICO-LEGAL COMMITTEE

Detroit, Mich., January 6, 1928.

To the Council, Michigan State Medical Society.

Gentlemen: The year 1927 has been uneventfully successful. Thirty-five suits, or threats, have been reported to this committee, which continues the percentage of slightly more than 1 per cent which has prevailed generally since this work began. The number of cases tried has been about as usual with two adverse verdicts for small amounts. In both cases, the X-rays constituted the cause of action. One plaintiff was slightly burned by a jump spark, perhaps through faulty technique, though the doctor claimed the patient moved. Suit was for \$10,000.00 and verdict for \$150.00. The other case was based on failure to have an injured wrist X-rayed. It was necessary for the patient to travel some distance to an X-ray machine. Two doctors testified in this case that the patient should have been sent for an X-ray. Their testimony took the case to the jury, who gave a verdict of \$1,500, covered by an insurance policy. We did not appeal this case, fearing a supreme court ruling, which would make it obligatory for every doctor to have every suspected fracture X-rayed. While most of us believe this to be true, a court ruling to that effect would make it difficult to defend the man who has not done it. We have other cases pending involving this same principle. Another case was settled during trial for a small amount, the insurance company paying the settlement. This

settlement was made because Mr. Barbour anticipated an adverse verdict at trial because an X-ray of a colles fracture was not taken until ten days or more had elapsed. The doctor claimed the resultant disability to be due to a ruptured annular ligament, but evidently the X-ray picture showed an imperfect alignment.

The general use of the X-ray machine, of radium and the ultra-violet ray, diathermy, etc., introduces a new menace to the men applying these measures. Several X-ray burn cases are pending. One alleged radium burn has recently been successfully defended and one violet ray burn, also, has been successfully defended. Other violet ray burn cases have been reported to us. It certainly is incumbent upon the men doing this work to use such extreme care in their treatments that if burns result they may successfully present the alibi of an idiosyncrasy in the patient.

This committee recognizes that every doctor treats female patients and that in so doing he always runs the chance of being made the victim of some designing blackmailer. Two such cases have been reported during 1927. While such matters are not civil mal-practice, we feel that the doctor, when adjudged innocent by his County Society, should have the support of the profession.

To extend unlimited financial assistance would be impossible, but it is within the prerogative of the Council to determine what, if any, action this committee should take in such cases. Two cases of vesico vaginal fistula are pending. Both these cases resulted from surgical procedures at the hands of members of the American College of Surgeons. We hope to successfully defend these as unavoidable accidents.

Respectfully submitted,

T. B. Tibbals, Chairman.
William J. Stapleton, Jr.
Angus W. McLean.
James D. Bruce.

4. The Treasurer, John R. Rogers, submitted certified audit of Ernst and Ernst as the Treasurer's report, which was referred to the Finance Committee.

5. The Secretary-Editor submitted the following as his Annual Report:

To the Council,

Michigan State Medical Society.

Gentlemen:

In compliance with the provisions of our By-Laws and regulations your Secretary-Editor tenders to you, and through the Council, to our members, this Annual Report of our Society's activities and status.

for the year 1927. For clarity and summarization it is made to consist of five sections: Financial, Journal, Society, Executive Activities and Extension plans.

FINANCIAL

The official statement and report from our auditors conveys our financial condition as of December 31, 1927.

(Refer to Appended Auditor's Statement).

FINANCIAL COMMENT

1. Appended is an itemization of the disbursements made under control of the budget adopted by the Council for 1927.

2. Our surplus is invested in approved bonds to the amount of \$22,678.75. This represents a net gain of \$13,093.75.

3. The Medico-Legal fund has a reserve of \$10,772.00 invested in bonds, and a checking balance of \$794.99. This records an increased reserve of \$11,566.99.

4. Our net worth on January 1, 1927, was \$14,754.34. Our net worth on January 1, 1928, is \$22,775.95, revealing a net gain for the year of \$8,024.61.

5. Our profit results from increased interest earnings, Journal profits, and by reason of diligent sustained effort in minimizing our expenses.

6. Your Treasurer, Secretary-Editor and Stenographer are under bonds to the Society.

7. Receipts from dues and for advertising are received in the form of checks or drafts. These are deposited in the bank. Disbursements are made by voucher signed by the Chairman, Treasurer and Secretary. At no time is actual currency or coin received, handled or disbursed. This financial procedure makes for positive record and control of all receipts and disbursements.

8. The disbursements for the Medico-Legal Committee are made by voucher drawn and signed by the Chairman of the Committee and countersigned by the Chairman of the Council and Secretary.

9. It will be noted that during the past three years there has been a reasonable increase in our net reserve. We feel that this policy should be adhered to until such time as the interest earnings of our investments yield sufficient returns to absorb the expenses of the Medico-Legal Committee. When that state of financial independence is reached, our annual dues may be re-

duced. We hope to attain that financial position within the immediate future.

10. We have received no new contributions to our Endowment Foundation.

11. The following Budget is submitted for 1928 for your approval:

SOCIETY BUDGET

Estimated Income:

3,100 members at \$10.00.....	\$31,000.00
Interest on Bonds, 20,000 at 5%.....	1,000.00
	<hr/>
	\$32,000.00

Expenditures:

Medical Legal Committee 3,100 at \$2.00	\$ 6,200.00
Journal Subscriptions 3,100 at \$2.50.....	7,750.00
Rent, Light, Telephone.....	1,200.00
Annual Meeting	1,000.00
Post-Graduate Conferences	3,500.00
Legislative Committee	2,000.00
Committee Expenses—Hospital History	500.00
Printing and Postage.....	300.00
Council Expense.....	1,000.00
Delegates to American Medical Association	500.00
Stenographic Services.....	2,500.00
Secretary's Salary.....	5,000.00
Contingent Fund	550.00
	<hr/>
	\$32,000.00
	\$32,000.00

JOURNAL BUDGET

Income:

3,100 Subscriptions.....	\$ 7,750.00
Advertising Sales.....	8,000.00
	<hr/>
	\$15,750.00

Expense:

Printing and Mailing.....	\$12,000.00
Wrappers	225.00
Editor's Salary and Expense.....	3,500.00
Reserve	25.00
	<hr/>
	\$15,750.00

12. It is recommended that your Secretary, who is under bond, be authorized to sign the Society vouchers, discontinuing the marked inconvenience of sending out the vouchers for additional signatures. That in lieu of the Chairman of the Council's signature he be supplied each month with a statement of disbursements.

DUES

Now and then the query is made by an individual member as to what returns he receives from his annual dues. Anyone advancing such a query immediately reveals that he has not kept himself informed as to our organizational activities. Neither does he evaluate the efforts of our Society as a whole to protect and conserve his material interests as well as our activities that enhance his professional work and standing. To all such inquiries we have replied by simply citing our organizational achievements and urged that the member keep himself informed by reading the Journal.

We again desire to remind our readers

that what has been wrought, the position we hold and the influence we wield resulted and was only made possible because of the sacrifice of time, contributions of thought and expenditure of labor on the part of Officers, Councilors, Committees and a goodly number of members that were unrewarded by money. Had such service been paid for, our dues would be entirely inadequate. Therefore we urge anew, that any member seeking to learn what yield of personal profit accrues from his dues, that he carefully study this annual report. It evidences a satisfactory annual return for the investment he makes.

SUMMARY OF EXPENSES

Account	Budget	Total	Over	Balance
Secretary-Editor	\$ 4,000.00	\$ 4,000.00	.....	.....
Stenographers	2,000.00	2,440.00	.....	\$ 360.00
Society	\$1,220.00			
Journal	1,220.00			
Postage & Printing	300.00	378.00	\$ 78.00	.....
Office Rental and Phone	1,200.00	1,200.00	.....	.....
Annual Meeting	1,000.00	603.56	.....	396.44
Council Expenses.....	1,000.00	730.67	.....	269.33
Delegates Expense.....	500.00	286.20	.....	213.80
Journal Expense.....	15,500.00	10,751.41	.....	4,748.59
Post-Grad. Expense..	3,700.00	2,145.45	.....	1,554.55
Public Health	\$ 200.00			
P. G. Exp.	3,500.00			
Society Expense	6,700.00	4,945.50	.....	1,754.50
Contingent				
Fund	\$4,700.00			
Legislative	2,000.00			
	\$35,700.00	\$27,480.79	\$ 78.00	\$9,297.21
	27,480.79			78.00
	\$ 9,219.21			\$9,219.21

EXPENSES—1927

Month	Editor	Stenogs.	Printing and Postage	Reprint Expense	Office Rent and Phone
January	\$ 333.00	\$ 200.00	\$ 50.00	\$ 57.35	\$ 100.00
February	333.00	200.00	50.00	85.52	100.00
March	333.00	200.00	50.00	323.50	100.00
April	333.00	240.00	50.00	153.78	100.00
May	333.00	200.00	60.00	54.34	100.00
June	333.00	200.00	10.00	254.27	100.00
July	333.00	240.00		212.43	100.00
August	333.00	200.00	20.00		100.00
September	333.00	200.00	30.00	80.36	100.00
October	333.00	200.00		423.85	100.00
November	333.00	160.00	28.00	117.35	100.00
December	337.00	200.00	30.00	1,261.12	100.00
	\$4,000.00	\$2,440.00	\$378.00	\$3,023.87	\$1,200.00
Credit				20.27	
				\$3,003.60	

DELEGATES EXPENSE

Budget	\$500.00
June—	
W. Earl Chapman.....	\$ 91.68
C. S. Gorsline	86.34
	\$178.02
July—	
J. D. Brook.....	108.18
	108.18
	286.20
	286.20
	Bal. \$213.80

COUNCIL EXPENSE

Budget	\$1,000.00
January—	
B. R. Corbus.....	\$ 15.00
Geo. L. LeFevre.....	75.00
B. R. Corbus.....	26.70
F. C. Warnshuis.....	19.70
	\$136.40
February—	
J. D. Bruce.....	52.25
Groskopf Bros.	35.00
	\$87.25
March—	
R. A. Burke.....	50.12
B. R. Corbus.....	15.00
Otto L. Ricker.....	25.00
	90.12
April—	
John R. Rogers.....	15.00
	15.00
June—	
B. R. Corbus.....	21.75
	21.75
August—	
B. R. Corbus.....	25.50
	25.50
October—	
B. R. Corbus.....	14.00
	14.00
November—	
Otto L. Ricker.....	7.00
R. C. Stone.....	80.40
	\$87.40
December—	
Geo. L. LeFevre.....	75.00
J. D. Bruce.....	178.25
	\$253.25
	\$730.67
	\$ 730.67
	Bal. \$ 269.33

ANNUAL MEETING EXPENSE

Budget	\$1,000.00
February—	
A. E. Catherwood—	
Trip to Grand Rapids.....	\$ 15.00 \$ 15.00
June—	
F. C. Warnshuis—	
Telg., Tips, R. R. Fare,	
Registration, Booths, etc.....	\$110.15
Fitzsimmons Bros.—Signs.....	4.50
St. Louis Button Co.....	30.33
J. B. Jackson—R. R. Fare.....	45.40
N. R. Torrey—Beaumont.....	47.50
A. P. Johnson Co.—Printing.....	38.71
	\$276.59
July—	
A. P. Johnson Co.....	71.30
C. Hoffman—Exp. on Trunk.....	2.50
David J. Levy.....	43.45
Master Reporting Co.....	149.32
	\$266.57
August—	
Fred P. Pratt.....	45.40
	45.40
	\$603.56
	\$ 603.56
	\$ 396.44

JOURNAL EXPENSE

January—	
Postage	\$ 20.00
Printing and Stock.....	891.50
Barlow Bros.—Binding Jrls.....	15.25
A. P. Johnson—Cuts.....	31.24
Addressograph Co.....	3.05
	\$961.05
February—	
Postage	20.00
Printing and Stock.....	870.61
	890.61
March—	
Postage	35.00
Printing and Stock	974.92
Addressograph Co.	8.23
	1,018.15

April—		
Postage	25.00	
Printing and Stock	783.32	
Addressograph Co.	5.54	
A. P. Johnson—Cuts.....	93.25	
A. P. Johnson—Envelopes.....	221.67	
		1,128.78
May—		
Postage	25.00	
Printing and Stock	833.91	
		858.91
June—		
Postage	30.00	
Printing and Stock	966.12	
Addressograph Co.	4.11	
A. P. Johnson—Cuts.....	71.32	
		1,071.55
July—		
Postage	30.00	
Printing and Stock	749.18	
Addressograph Co.	4.92	
		784.10
August—		
Postage	25.00	
Printing and Stock	917.56	
		942.56
September—		
Printing and Stock	715.14	
Addressograph Co.	3.59	
		718.73
		\$8,374.44
October—		
Postage	25.00	
Printing and Stock	757.57	
Addressograph Co.	1.60	
		784.17
November—		
Postage	25.00	
Printing and Stock	917.22	
Addressograph Co.	2.92	
A. P. Johnson—Cuts.....	12.63	
		957.77
December—		
Postage	15.00	
Printing and Stock	830.24	
Addressograph Co.	2.17	
Lewis Electric Co.	18.78	
Taylor Letter Shop	30.00	
A. P. Johnson—Cuts.....	18.73	
		919.92
		\$ 2,661.86
		\$11,036.30
Credit for Cuts pd. by Authors.....	284.89	
		\$10,751.41
Editor's Salary	4,000.00	
Half of Stenographer's	1,220.00	
		\$15,971.41

SOCIETY EXPENSE

January—		
C. Hoffman—Christmas.....	\$ 25.00	
F. C. Warnshuis.....	2.10	
Central Press Clipping Service	3.00	
H. G. Smith—Honorarium.....	500.00	
H. W. Ten Broek & Sons—Ins.	55.00	
Tisch Hine.....	7.86	
Taylor Typewriter Store.....	1.50	
Burroughs Adding Machine Co.	98.00	
		\$692.45
February—		
F. C. Warnshuis.....	8.00	
Central Press Clipping Service	3.00	
Tisch Hine.....	6.05	
John R. Rogers.....	5.00	
Western Union.....	3.60	
		25.65
March—		
A. P. Johnson.....	54.88	
Central Press.....	3.00	
Tisch Hine.....	1.10	
F. C. Warnshuis.....	10.75	
		69.73

April—		
Ernst and Ernst.....	147.48	
F. C. Warnshuis.....	7.79	
Central Press.....	3.00	
Herpolsheimer Co.	1.50	
Taylor's.....	3.50	
Western Union.....	7.53	
Tisch Hine.....	1.23	
		172.03
May—		
F. C. Warnshuis.....	7.75	
Central Press.....	3.00	
Tisch Hine.....	8.35	
Jas. H. Matthews Co.	115.00	
		134.10
June—		
Caroline B. Crane.....	69.17	
F. C. Warnshuis.....	7.05	
American Medical Association.....	12.00	
Central Press.....	3.00	
Caroline B. Crane.....	18.06	
J. B. Jackson.....	9.30	
W. H. Marshall.....	35.39	
Mayflower Hotel—C. B. Crane.....	18.30	
Rand Kardex.....	5.60	
Tisch-Hine.....	12.48	
Western Union.....	29.53	
W. H. Marshall.....	12.00	
C. B. Burr.....	49.21	
A. P. Johnson.....	24.79	
		305.88
		\$1,399.85
July—		
F. C. Warnshuis.....	.65	
Central Press.....	3.00	
Tisch Hine.....	3.10	
Western Union.....	5.34	
A. P. Johnson Co.....	455.36	
Master Reporting Co.....	114.66	
John S. Haggerby.....	12.00	
Legal Expense.....	100.48	
		694.59
August—		
Tisch Hine.....	2.23	
Western Union.....	1.80	
Central Press.....	3.00	
C. B. Crane.....	49.59	
		56.62
September—		
Norris-McPherson — Attorneys	445.78	
Central Press.....	3.00	
Tisch-Hine.....	1.80	
Western Union.....	1.60	
		452.18
October—		
Central Press.....	3.00	
Tisch-Hine.....	4.90	
G. R. Ins. Agency.....	125.00	
Illinois Medical Journal.....	10.00	
Western Union.....	1.93	
		144.83
November—		
F. C. Warnshuis.....	7.41	
Central Press.....	3.00	
G. R. Trust.....	5.00	
Tisch-Hine.....	7.75	
Western Union.....	5.41	
		28.57
December—		
F. C. Warnshuis.....	1.75	
Central Press.....	3.00	
R. R. Smith.....	76.02	
Western Union.....	9.49	
Wayne County Society.....	1,011.00	
Wawne County Society.....	1,011.00	
F. C. Warnshuis.....	68.00	
Tisch-Hine.....	1.60	
		2,181.86
		\$3,558.65
		\$4,958.50
Hospital Pamphlets, Cr.....	13.00	
		\$4,945.50
Half of Stenographer.....	1,220.00	
		\$6,165.50

POST-GRADUATE EXPENSE			MEDICAL-LEGAL DEFENSE			
January—			Cash Account			
				Debits	Credits	
F. C. Warnshuis—Calhoun Co.	\$ 12.00		Jan. 3	Unclipped Coupons	\$ 30.00	
A. L. Jacoby	9.14		Jan. 3	Balance from 1926		\$ 496.07
David J. Levy	14.75		Jan. 31	Dues		934.00
Geo. E. McKean	11.60		Jan. 31	Interest		30.00
M. A. Mortensen	13.85		Jan. 31	F. B. Tibbals—½ Retainer Fee	500.00	
Mayer-Schaurer Co.—Programs	22.50			F. B. Tibbals—Stamps	5.00	
John B. Youmans	15.66			Douglas-Barbour-Brown—½ Fee	500.00	
Western Union	2.34			Harry C. Howard—Retainer Fee	100.00	
		\$101.84	Feb. 24	Interest	7.64	
February—			Feb. 24	Douglas-Barbour-Brown	165.00	
Joint Com. on Public Health	100.00		Feb. 28	Purchase of Bond	970.00	
Richard W. McLain	6.80		Feb. 25	Interest		58.33
		106.80	Feb. 28	Dues		1,508.00
March—			Feb. 28	Interest		14.74
Wayne County Medical Society	500.00		Mar. 30	Douglas-Barbour-Brown	150.00	
		500.00	Mar. 30	Interest	22.08	
April—			Mar. 30	Purchase of Bond	1,000.00	
L. F. Foster	15.00		Mar. 30	Dues		1,450.00
W. H. Marshall	10.00		Mar. 30	Interest		215.00
Hotel Hays	68.10		Apr. 30	Interest	32.16	
		93.10	Apr. 30	F. B. Tibbals—Bal. Retainer Fee	500.00	
May—				Douglas-Barbour Brown—		
F. W. Warnshuis	28.50			Retainer Fee	500.00	
Alexander Campbell	18.00		Apr. 30	Purchase of Bond	500.00	
H. S. Collist	14.14		Apr. 30	Bal. due on Interest		19.66
Master Reporting Co.	130.94		Apr. 30	Dues		1,301.75
O. L. Ricker	31.90		May 31	Interest	19.66	
S. C. Moore	20.00		May 31	Douglas-Barbour-Brown	1,019.38	
C. F. De Vries	20.00		May 31	Dues		536.25
A. P. Johnson Co.	9.80		June 30	Douglas-Barbour-Brown	127.00	
		273.28	June 30	Dues		45.00
June—			July 30	Dues		105.00
H. T. Clay	25.00		Aug. 23	Douglas-Barbour-Brown	555.15	
John B. Youmans	9.10		Aug. 30	Dues		98.00
Pantlind Hotel	6.00		Sept. 30	Dues		44.92
Lewis Pollock	20.00		Sept. 30	Interest		242.50
		60.10	Oct. 31	Dues		232.75
October—			Oct. 31	Interest		110.00
H. C. Collisi	5.00		Oct. 31	Bond—Due		500.00
J. B. Jackson	18.03		Nov. 30	Dues		37.75
F. A. Reetz	26.50		Dec. 30	Dues		157.00
A. P. Johnson	19.31		Dec. 30	Adjustment—Unclipped		
B. R. Corbus	216.13			Coupons 1926		30.00
F. A. Reetz	6.00		Dec. 29	Meridith P. Sawyer	131.25	
		290.97		Douglas-Barbour-Brown	205.00	
November—				Douglas-Barbour-Brown	332.35	
F. C. Warnshuis	62.00				\$7,371.67	\$8,166.72
William N. Braley	30.54					7,371.67
G. Van Amber Brown	32.37					
M. A. Mortensen	87.06					
A. P. Johnson Co.	10.50					
		222.02				
December—						
All Saints Episcopal Church	10.00					
A. Leenhouts	5.50					
M. A. Mortensen	23.15					
C. C. Slemmons	7.95					
University Hospital	144.75					
A. P. Johnson Co.	78.68					
O. L. Ricker	25.00					
J. L. Powers	25.00					
Geo. L. LeFevre	25.00					
R. A. Burke	25.00					
I. H. Van Leuven	25.00					
J. Hamilton Charters	25.00					
Henry Cook	25.00					
G. Van Amber Brown	11.75					
J. Hamilton Charters	23.96					
F. C. Warnshuis	16.60					
		\$497.34				
						\$ 497.34
						\$2,145.45
Budget						\$3,500.00
						2,145.45
Balance						\$1,354.55

THE JOURNAL

The twenty-sixth volume of The Journal contains 764 pages of reading matter and 456 pages of advertising, or a total of 1,220 pages. This is a gain of 80 reading pages and 30 advertising pages, or a net increase in Journal size of 110 pages, which is equivalent to one number.

The average monthly circulation has been 3,350 copies, an increase of 100.

The total cost of publication was \$15,971.41. Subscriptions and advertising receipts were \$16,653.90. A profit of \$682.49 must therefore be credited to The Journal.

Your Editor refrains from comment upon the intrinsic merit and value of The Journal. Such appraisal and comment must be forthcoming from the Council and our individual members. We have diligently sought to so edit The Journal that each issue would reflect credit upon our members and our Society. Our Editorial ideals have been to impart scientific instruction; to afford a medium for our members for the publication of their personal and collective investigations and ex-

periences; to keep them enlightened as to public health activities and tendencies; editorial discussion and comment upon our common professional economic and social problems; the recording of our state and county organizational activities and the imparting of items of news and progress. Supplemental to all of which we have ever borne in mind that our Journal constitutes the Archives of our Society. Our Editorial quest has ever been to interweave in our Journal a spirit of loyalty and enthusiasm seeking thereby to foster a spirit of genuine fraternalism that would beget a solidarity that is so desirable. We are not the least bit hesitant in claiming that it is our belief that such a policy has gone far towards establishing and maintaining the splendid *esprit de corp* that is so evident among our members. Such has been our ideal. We have sought to so conform our editorial work.

How well we have succeeded, or, what our errors of omission or commission have been is not for your Editor to acclaim. The final appraisal must be formulated by our members. Our editorial duties are not inconsiderable; on the contrary, they demand the expenditure of an increasing amount of time and involve a host of details pertaining to advertising, mailing, postal regulations, printing and reprints. The purely business side of our publication calls for constant thought, planning and execution. And yet withal we have but few apologies while we point with pride to the position our Journal holds in the field of medical journalism. We feel it is a publication that reflects credit upon our Society.

Our editorial duties have been materially enhanced and made pleasant by the valued assistance that has been accorded to the Editor by the Publication Committee of the Council. I record my personal appreciation for the aid that was so generously tendered.

RECOMMENDATIONS

1. Commencing with the first number of volume 27—each number of The Journal will be copyrighted.
2. That as soon as possible, a department be established in The Journal devoted to Post-graduate Education. Such department to impart through planned special articles a definite course of reading covering the main branches of medicine. That the Publication Committee, with the Editor, be authorized to select a staff of writers for this department from the mem-

bers of the faculty of the Post-graduate Department of the University and the Detroit Post-graduate School, and to supervise the department.

From time to time your Editor has made careful studies of other medical publications, seeking, if possible, to ascertain wherein our Journal could be made more valuable to our members. Some changes have been made during the past year, yet on the whole, we feel that we are adequately covering all that should be included in our Juornal. We do plead for more practical articles imparting personal experiences, more case reports, more articles dealing with our public relationships and responsibilities. Then, too, for educational and entertainment we are eager to receive articles imparting personal impressions of visits made to our own and foreign clinical centers. Our plea to our members is to send in for publication, articles dealing with these topics.

SOCIETY

As one reviews the work and achievements of former years and formulates comparisons, the evident conclusion stands forth: Never in our organizational history has our house been so well in order. Words are quite inadequate to create a comprehensive visualization of all that we have attained. It is equally impossible to transmit the far-reaching results that have attended our Society's activity. The accomplishments have extended beyond the individual member and our collective whole. Our influence has caused itself to be manifest in the life of our commonwealth and to establish a better public relationship that in turn enhances the individual members' professional and material interests. Thus have we creditably accounted for our stewardship and justified anew the purposes of our organizational existence. It is germane at this time, ere drawing further summary, to enumerate the several avenues that indicate the scope of general activities.

MEMBERSHIP

On December 31, 1926, our membership was 3,064. On December 31, 1927, our membership was 3,242, a gain of 178 members. This numerical strength is represented by the following County Society enrollment:

County	1926	1927	Loss	Gain	Deaths
Alpena	19	18	1	.....	.....
Antrim, Charlevoix, Emmet	13	12	1	.....	.....
Barry	18	14	4	.....	.....
Bay	63	65	.....	2	.....
Benzie .....	.....	.....	.....	.....	.....
Berrien	37	39	.....	.....	.....

County	1926	1927	Loss	Gain	Deaths
Branch	14	14			
Calhoun	102	107		5	2
Cass	8	7	1		
Chippewa-Mackinac	21	16	5		2
Clinton	14	16		2	
Delta	21	22		1	
Dickinson-Iron	17	23		6	
Eaton	20	19	1		
Genesee	110	103	7		
Gogebic	27	25	2		1
Grand Traverse-Leelanau	26	28		2	
Gratiot-Isabella-Clare	28	30		2	
Hillsdale	21	22		1	
Houghton	41	40	1		
Huron	8	8			
Ingham	85	81	5		
Ionia	32	37		5	
Jackson	65	74		9	1
Kalamazoo-Van Buren	111	113		2	
Kent	190	208		18	3
Lapeer	23	19	4		1
Lenawee	29	34		5	
Luce		9		9	
Macomb	31	33		2	
Manistee	8	11		3	
Marquette-Alger	33	33			
Mason	10	9	1		
Mecosta	19	20		1	
Midland	7	7			
Menominee	11	11			
Monroe	26	28		2	
Muskegon	61	60	1		
Oceana	8	8			
Newaygo	8	11		3	
Oakland	79	80		1	1
O. M. C. O. R. O.	10	9	1		
Ontonagon	6	5	1		1
Ottawa	28	28			
Saginaw	47	67		10	
Sanilac	11	10	1		
Schoolcraft	5	4	1		
Shiawassee	27	30		3	1
St. Clair	47	48		1	1
St. Joseph	21	21			3
Tri	19	17	2		
Tuscola	22	21	1		
Washtenaw	118	125		7	1
Wayne	1,228	1,343		115	19
Total	3,064	3,242	41	219	37
		3,064		41	
Gain		178		178	

DEATHS

Official notice was received of the deaths of the following members:

Name	County	City
Grant, A. B.	Calhoun	Albion
Jesperson, Sven	Calhoun	Battle Creek
Dickson, Geo. J.	Chippewa-Mackinac	Sault Ste Marie
Lemon, A. E.	Chippewa-Mackinac	Sault Ste Marie
Stebbins, E. B.	Gogebic	Ironwood
McKim, L. H.	Jackson	Stockbridge
Fuller, Wm.	Kent	Grand Rapids
Heasley, Joseph A.	Kent	Grand Rapids
Karshner, C. F.	Kent	Grand Rapids
Hart, Wm. D.	Lapeer	Almont
MacKinnon, Geo. W.	Oakland	Oxford
Porter, W. K.	Ontonagon	Trout Creek
Parsons, F. L.	Shiawassee	Durand
Wheeler, R. H.	St. Clair	Port Huron
Barney, L. S.	St. Joseph	Constantine
Kingsley, J. R.	St. Joseph	Three Rivers
Scidmore, A. W.	St. Joseph	Three Rivers
Sigler, H. F.	Washtenaw	Pinckney
Beisman, Joseph	Wayne	Detroit
Bell, Samuel	Wayne	Algonac
Duffield, Francis	Wayne	Detroit
Geib, Daniel	Wayne	Detroit
Graham, Don M.	Wayne	Detroit
Hastie, William G.	Wayne	Detroit
Herbert, Leo H.	Wayne	Detroit
Hyman, M. M.	Wayne	Detroit
Jacoby, A. L.	Wayne	Detroit
King, J. Everett	Wayne	Detroit
McLean, Charles H.	Wayne	Detroit
Schnell, Arthur E.	Wayne	Detroit
Sisler, John H.	Wayne	Detroit
Stephenson, F. T. F.	Wayne	Detroit
Taylor, P. B.	Wayne	Detroit
Thomas, Lloyd C.	Wayne	Detroit
Tiffen, Walter E.	Wayne	Detroit
Walker, Frank B.	Wayne	Detroit
Welz, Walter E.	Wayne	Detroit

We officially record their deaths and revere their memory. Their demise and passage to that unknown bourne marks the termination of lives that have been concerned with and devoted to mankind. Each in his own sphere served to the capacity of his personal endowments and none there are who can fully evaluate their silent contributions to the welfare of their fellowmen. Nor can we calculate the extent of their personal sacrifices that were subscribed as they responded to their calls for service to administer to the physical needs of those who sought their aid and advice. Their days of labor are over, none but their immediate family and relatives retain the sacred memories of their lives of devotion. We who were but fellow-members, all too soon forget and leave unsung and unrecorded the services they rendered.

As we officially record their death, the recurrent thought comes forth that we, as a profession, might well erect a lasting tribute to all our departed disciples of medicine in the form of some monument placed on our University campus. To do so would perpetuate the lives and labors of all doctors of medicine who gave of self that all life in our commonwealth might be enhanced and pursued, safeguarded through the ministrations of scientific medicine. Such a recommendation is respectfully submitted.

POST-GRADUATE CONFERENCE

The following Post-graduate Conferences were conducted during 1927:

District	Date	City
1st	November 1	Pontiac
2nd	April 26	Lansing
3rd	See Foot Note No. 1	
4th	See Foot Note No. 2	
5th	May 11	Grand Rapids
6th	December 7th	St. Johns
7th	See Foot Note No. 3	
8th	September 29	Saginaw
9th	April 19	Cadillac
9th	September 12	Traverse City
10th	March 31	Bay City
11th	September 29	Shelby
12th	October 12	Marquette
13th	October 20	Alpena
14th	See Foot Note No. 4	

Note No. 1—District conducted Orthopedic Clinic and Survey and a picnic.

Note No. 2—Two Academy of Medicine Clinics held in Kalamazoo.

Note No. 3—Last Conference in December, 1926. Arrangements made for three Conferences in 1928.

Note No. 4—University two day clinic in lieu of Conference.

The appreciation, interest and attendance recorded evidence anew this important feature of our Society activity. In the arrangement of topics we have adhered closely to featuring diagnosis and treatment. The Society is deeply indebted to those members who gave freely of their

time in participating as speakers on these programs.

The following recommendations are tendered:

1. That one Post-graduate Conference be conducted in each Councilor District.

2. That under direction of each District's Councilor, each County Society, or in some districts a combination of County Societies, be aided in the conducting of two half-day Clinical Conferences during 1928.

3. That a team be sent to the Upper Peninsula to conduct three conferences at three designated centers.

4. That the Society, through the Council's Committee on County Society work, arrange for such two or three-day clinics as may be deemed expedient.

The interest manifested and the expression of desire for more two-day Hospital clinics similar to the one conducted by the staff of the University Hospital justified the recommendation that the following Hospital clinics be conducted, and your Secretary-Editor authorized to supervise the details:

April: Detroit, (three days).

June: Flint, (two days).

August: Grand Rapids, (two days).

November: Ann Arbor, (two days).

The contemplated program to consist of clinical demonstrations by members of the staffs of local hospitals during the day, with evening session on the first day. The evening program to be composed of discussions by well-known clinicians from this and surrounding states.

These hospital clinics are not and will not interfere with the regular schedule of Councilor District Conferences. They will supplement them and will afford opportunity for members from regional sections of the state to witness clinical demonstrations with a minimum of travel inconveniences.

COUNCILOR REPORTS

The following Annual Reports of the members of the Council are submitted:

Annual Report for First Councilor District

J. Hamilton Charters, Councilor

No. Societies in Dist., 3; Total Membership, 1,306
No. Post-Graduate Conferences held—None.

Counties	Members	Frequency of Meetings	Active or Not
Macomb	27	Twice Monthly	Active Very
Oakland	78	Monthly	Active Very
Wayne	1,201	Ev. Tuesday Eve.	Active

COMMENTS

Wayne and Oakland County Societies very active in all branches.

Macomb County runs along the same as usual, think a Post-Graduate Conference there would help to stimulate them a little.

All in all, my District in very healthful condition.

(Signed) J. H. Charters.

Annual Report for Second Councilor District

B. F. Green, Councilor.

No. Societies in Dist., 3; Total Membership, 170.

Counties	Members	Frequency of Meetings	Active or Not
Hillsdale	22	8 to 10 yearly	Active
Ingham	79	Monthly	Active
Jackson	69	Monthly	Active

COMMENTS

Hillsdale County Society holds joint meetings with Branch and St. Joseph County Societies during summer and autumn. Attendance and programs good.

I have asked for the bulletins or programs of Ingham and Jackson, but seldom hear from them directly. It would seem to me that the Councilor might at least be on their mailing lists—(but perhaps they do not have any). Consequently, I have no recent information as to these Counties. My impression is that they are doing very good work, however.

(Signed) B. F. Green.

Annual Report for Third Councilor District

R. C. Stone, Councilor.

No. Societies in Dist., 4; Total Membership, 159.
No. Post-Graduate Conferences held—None.

Counties	Members	Frequency of Meetings	Active or Not
Branch	14	4 a year	Fair, improving
Calhoun	106	10 per year	Active
Eaton	19	4 a year	Not Active
St. Joseph	20	4 a year	Improving

COMMENTS

General conditions in District are improving.

(Signed) R. C. Stone.

Annual Report for Fourth Councilor District

C. E. Boys, Councilor.

No. Societies in Dist., 3; Total Membership, 158.

Counties	Members	Frequency of Meetings	Active or Not
Berrien	39	Monthly	Very Active
Cass	7	None	Not Active
Kalamazoo, Allegan, Van Buren	112	Monthly	Active

COMMENTS

Cass should, perhaps, be allowed to join most convenient neighboring Society, as a County So-

ciety, is very unlikely there, this due, largely, to difficulty of getting together at any one place.
(Signed) C. E. Boys.

Annual Report for Fifth Councilor District
B. R. Corbus, Councilor.
No. Societies in Dist., 4; Total Membership, 270.
No. Post-Graduate Conferences held—1.

Counties	Members	Frequency of Meetings	Active or Not
Barry	14	9 Meetings	Active
Ionia-Montcalm ...	23	10 Meetings	Active
Kent	205	10 Meetings	Active
Ottawa	28	10 Meetings	Active

(Signed) B. R. Corbus.

Annual Report for Sixth Councilor District
Henry Cook, Councilor.
No. Societies in Dist., 3; Total Membership, 149.
No. Post-Graduate Conferences held—1.

Counties	Members	Frequency of Meetings	Active or Not
Clinton	17	Monthly	Active
Genesee	103	Monthly	Active
Shiawassee	29	Monthly	Active

(Signed) Henry Cook.

Annual Report for Seventh Councilor District
T. F. Heavenrich, Councilor.
No. Societies in Dist., 4; Total Membership, 83.
No. Post-Graduate Conferences held—None.

Counties	Members	Frequency of Meetings	Active or Not
Huron	8	None	Not Active
Lapeer	20	None	Not Active
Sanilac	11	No Regular, 1 last year	Not Active
St. Clair	47	Semi-monthly for 8 months	Active

COMMENTS

St. Clair County average attendance at meetings, 15 members. Letter from Sanilac enclosed. They have never been able to hold meetings, and we have invited them to St. Clair on special occasions, but without avail. The distances are not too great in their County for them to get together and the roads are all good. If I can get a day off in the near future, I think I will go up and see if I can stir them up. To me in the distance, and from what I can get from observation, it is a case of professional jealousy. Huron County has 16 practicing physicians.
Would suggest trying a clinic at either Sandusky or Bad Axe to stimulate this section.
St. Clair has 56 medical men in the County.
(Signed) T. F. Heavenrich.

Annual Report for Eighth Councilor District
Julius Powers, Councilor.
No. Societies in Dist., 4; Total Membership, 125.
No. Post-Graduate Conferences held—2.

Counties	Members	Frequency of Meetings	Active or Not
Gratiot, Isabella, Clare	30	Monthly	Active
Midland	7	2 or 3 a year	Not Active

Counties	Members	Frequency of Meetings	Active or Not
Saginaw	67	Monthly	Active
Tuscola	21	Monthly	Active

(Signed) J. Powers.

Annual Report for Ninth Councilor District
O. L. Ricker, Councilor.
No. Societies in Dist., 4; Total Membership, 64.
No. Post-Graduate Conferences held—2.

Counties	Members	Frequency of Meetings	Active or Not
Benzie .....	.....	No Report	No Report
Grand Traverse ...	28	Monthly	Very Active
Manistee	11	Few meetings	Not Active
Mason	8	1 or 2 last year	Not Active
Kalkaska, Mis- saukee, Wex- ford Tri	17	Monthly	Fairly Active

COMMENTS

Manistee wants a good speaker for meetings at Mercy Hospital two or three times a year (evening meetings). Also some one to talk to them about hospital records.
Mason County should be given to Muskegon County (Le Fevre), as it is too far from us to develop any interest.
Benzie County should be given to Grand Traverse County.
We need to go to Ludington to put on an evening meeting and create new interest.
(Signed) O. L. Ricker.

Annual Report for Tenth Councilor District
Paul R. Urmston, Councilor.
No. Societies in Dist., 2; Total Membership, 73.

Counties	Members	Frequency of Meetings	Active or Not
Bay, Arenac, Iosco	64	Twice a month except in summer	Very Active
Otsego, Montmorency, Crawford, Oscola, Roscommon, Ogemaw	9	2 or 3 meetings a year	Members Scattered

COMMENTS

Bay County Medical Society has the reputation of being the most active Society in the state.
At each meeting this year we have an outside speaker and the attendance has been above normal and all have gained something by attending the meetings.
(Signed) P. R. Urmston.

Annual Report for Eleventh Councilor District
George L. Le Fevre, Councilor.
No. Societies in Dist., 6; Total Membership, 138.
No. Post-Graduate Conferences held—1, Shelby.

Counties	Members	Frequency of Meetings	Active or Not
Mecosta	20	Monthly—90%	Active
Montcalm-Ionia ...	39	Monthly—65%	Active
Muskegon	60	Monthly—60%	Active
Oceana	8	Monthly—87%	Active
Newaygo	11	.....	.....
Osceola-Lake .....	.....	.....	.....

COMMENTS

Montcalm and Ionia wants Post-Graduate Conference this coming year. I will make an effort

to call on Nawaygo, Osceola and Lake Counties, soon.

(Signed) Geo. L. Le Fevre.

Annual Report for Twelfth Councilor District
Richard Burke, Councilor.
No. Societies in Dist., 10; Total Membership, 180.
No. Post-Graduate Conferences held—

Counties	Members	Frequency of Meetings	Active or Not
Chippewa, Mackinac	13	Monthly	Active
Delta	22	Monthly	Active
Dickinson-Iron ...	21	Monthly	Active
Gogebic	24	Monthly	Active
Houghton-Baraga-Keweenaw	38	Monthly	Active
Luce	9	Monthly	Active
Ontonagon	5	Monthly	Active
Marquette-Alger ..	33	Monthly	Active
Menominee	11	Monthly	Active
Schoolcraft	4	Monthly	Active

(Signed) R. Burke.

Annual Report for Thirteenth Councilor District
B. Van Leuven, Councilor.
No. Societies in Dist., 2; Total Membership, 50.
No. Post-Graduate Conferences held—3.

Counties	Members	Frequency of Meetings	Active or Not
Alpena-Alcona	18	Monthly	Very Active
Antrim-Charlevoix-Cheboygan-Emmet	12	1 Post-Graduate	Not Active
Presque Isle		None	Not Active

COMMENTS

It seems impossible to revise the Northern Michigan Society to any kind of activity. Changes in officers have been made, but the new ones are not much more active than the old.

The men in the resort counties are so busy in the summer that they cannot attend, and in the winter the roads are impossible.

(Signed) B. Van Leuven.

Annual Report for Fourteenth Councilor District
J. D. Bruce, Ann Arbor, Councilor.
No. Societies in Dist., 3; Total Membership, 185.

Counties	Members	Frequency of Meetings	Active or Not
Lenawee	34	Monthly except July	Active
Monroe	28	Monthly except July, Aug., Sept.	Active
Washtenaw-Livingston	123	Monthly except July, Aug., Sept.	Active

COMMENTS

Washtenaw and Livingston are not taking advantage of the opportunities afforded by the Medical School and University Hospital and St. Joseph's Sanitarium. The splendid staff and well equipped laboratories of these institutions are not being utilized as they might be in the interest of the local medical organization.

Lenawee and Monroe, notwithstanding rather increased interest over the preceding year, the local Secretaries are not at all satisfied.

While there are local conditions in each of these counties which make administration somewhat difficult, I am inclined to think that the loyalty and activity of the County Officers will be recorded by greater interest and an increased membership in 1928.

(Signed) J. D. Bruce.

ANNUAL MEETING

The House of Delegates designated Detroit as the place for holding our next Annual Meeting. We requested, and the President of the Wayne County Medical Society appointed the following local committee on arrangements:

E. C. Baumgarten, Chairman; F. C. Witter, C. C. Birkelo, Frank A. Kelly, L. W. Hull.

This Committee submits the recommendation that some date in September be selected.

We further recommend that in consultation with Section Officers, Local Committee on Arrangements and the Executive Committee of the Council, the Secretary be authorized to arrange a program of clinical and moving picture demonstrations that will not conflict with the Section programs.

It is also recommended that if, after a local survey and report to the Executive Committee, an exhibit of commercial supplies is deemed advisable, the Secretary shall be empowered to perfect necessary arrangements.

The recommendation is advanced that the Executive Committee and the President shall be empowered to invite such national speakers as may be deemed desirable for the General Session and for any public meeting that may be determined upon.

LEGISLATIVE COMMISSION

The House of Delegates created and the President appointed a Legislative Commission instructed to formulate a new medical practice law, to cause it to be introduced in the next session of the legislature, and to conduct such a campaign of education throughout the state as will best tend to secure the enactment of such a new law. Though the Commission has had no meetings, its Chairman and your Secretary have been obtaining all available information and facts which will be submitted to the Commission at an early date. Its activities and plans will be reported to our members through The Journal.

WOMAN'S AUXILIARY

At the Mackinac Island meeting a Woman's Auxiliary of our State Society was organized with Mrs. G. L. Kiefer as President and Mrs. J. O. McIntyre as Secretary. Organization of County Auxiliaries is in progress. A page in The Journal has been placed at the disposal of the Auxiliary. We are confident that the assistance rendered and the achievements recorded will be of material value to the Society.

It is recommended that \$250.00 be contributed to the Auxiliary's General Fund for the purpose of aiding in the defrayment of organizational and administrative expense.

ENDOWMENT FOUNDATION

No bequests or contributions have been received for our Endowment Foundation that was organized in 1926. It is recommended that the Secretary be instructed to judiciously solicit contributions and bequests after consultation with the Executive Committee.

MEDICAL HISTORY

Under direction of its capable Chairman this Committee is making excellent progress. Though no such request or suggestion has been forthcoming, it is suggested that if the compilation becomes sufficiently advanced during the year, that the financial problems of printing and distribution be placed in the hands of the Secretary and the Executive Committee.

ANNUAL CONFERENCE OF COUNTY SECRETARIES

Definite value results from this Annual Conference. It is recommended that the President and the Secretary be empowered to designate the place and date for the 1928 Conference.

EXECUTIVE COMMITTEE

The experiences of the past year confirm the wisdom of the creating of an Executive Committee. Its monthly meetings, in which our organizational work and problems are reviewed and directed, have achieved much in extending the scope of our work.

Its members have given freely of their time in attending meetings, a no inconsiderable contribution. Your Secretary-Editor wishes to acknowledge the opportunity thus accorded him for securing administrative guidance.

SUMMARIZATION

I am refraining from incorporating in this Annual Report many of the routine activities of the Society and of this office. During the year these have been reported

or commented upon from time to time in The Journal. For summarization, record and members' information I am appending the following tabulation that imparts the inclusive scope wherein our Society has served its members and attained the ends that justify its existence:

1. Joint Committee on Public Health Education.
2. Woman's Auxiliary.
3. District Post-graduate Conferences.
4. Post-graduate Clinic at the University Hospital.
5. Lectures to high school students.
6. Creation of a Legislation Commission.
7. Attendance at several hearings while legislature was in session and the defeat of the Chiropractor bill.
8. Investigation of Illegal practitioners.
9. Hospital Survey.
10. Listing of Wayne County Members in Detroit Telephone Directory.
11. Providing Speakers for County Society programs.
12. Annual Conference of County Secretaries.
13. Medico-Legal defense for members.
14. The Journal.
15. Annual Meeting.
16. Support to the establishment of a Post-graduate school at our University.
17. Close co-operation with the State Department of Health.
18. Endowment Foundation.
19. Conference with representatives of State Organizations concerned with health, hospitals and social agencies.
20. Correspondence relative to individual members' personal inquiries and problems.
21. Compilation of Medical History of Michigan (Committee engaged in work).
22. Activities of Standing Committees of the Society, each concerned with specific problems.

ADMINISTRATION POLICIES

The trend of progress in all matters pertaining to medical education, practice, economics and our individual and collective relations to the public definitely establish new and increasing organizational responsibilities. Time was when the primal object and purpose of medical societies was concerned solely with the professional enhancement of members. That day is passed. Any County or State Society so limiting its activities, fails to acquit itself of the responsibilities that the progress of

the times and the public have placed upon us.

Even now we are dilatory. While we have in a measure extended our scope of organizational work, we have by no means caused it to include all the impinging contacts that necessarily intermesh with our organizational and professional life. Again, along certain avenues, while activity has been undertaken, we are lacking in our failure to press forward with greater avidity and in not exercising increased directing influence and guidance.

The thought I am seeking to convey is that the time is at hand when our State Society must institute some radical innovations and enlarge as well as broaden our policies, plans, work and administrative methods. We must write anew, definite purposes and establish a new and more inclusive scope of work.

My years of official contact and work in affairs included and related to medical organizations, the observations made and the experiences encountered, impel me at this time to present for your consideration a plan or platform that will set forth in outline only, the fundamental policies that should be embraced and executed through our administrative offices and officials.

(A)

1. Maintenance of County Units as now organized, but to cause these County Societies to extend their organizational strength so as to include every eligible graduate in medicine.

2. To provide for our County Societies and its individual members increased opportunities for scientific advancement and professional efficiency by means of definitely planned programs, clinics, conferences and post-graduate instructions.

This entails the conducting of a well thought out program of administrative supervision involving the expenditure of considerable time in directing guidance and leadership.

Such a policy and object, it will be perceived, causes our State Society to assume and intimately concern itself with the enhancement, the elevation of standards and the increasing of the skill and ability of the individual doctor, in order that the people may have available doctors who are thoroughly abreast in scientific knowledge and its application to communal life. Such a policy and premise is fundamental and rightly demands every possible effort to attain its broadest application. Having

done so, we then must concern ourselves with our next outstanding obligation and responsibility.

(B)

The education of the public as to the truths of Scientific Medicine through the following channels:

1. Day Medical Lectures.
2. Press Health Columns.
3. High School Lectures.
4. Central Bureau of Information to which lay individuals may submit inquiries for medical and health guidance.

The first three activities were instituted by our Society and delegated to the Joint Committee on Public Health Education. They are our children. However, because of our oversight and failure to hold a more adhesive contact these activities are receiving far too scant consideration and organizational action so that these offspring are drifting from under intimate supervision. Unless we concern ourselves more actively with their work we need not be surprised to find that ere long they will attain their independence and divorce themselves by forming an independent organization directed and financed by lay individuals. Such an eventuality cannot well be condoned or justified. Consequently there is an urgent need for reasserting ourselves to a more extended activity in that work. There is not only a tremendous opportunity, but a pressing urge that our Society not only formulate, but also operate a Central Bureau of Information to which any person or any organization may appeal and receive dependable medical information and guidance. It is quite desirable as well as imperative that the organization of this bureau be authorized and conducted by your Secretary.

(C)

Legislation and regulation of medical practice is a field wherein our Society must not only concern itself, but must exercise a guiding influence upon our legislature and in enlightening the public as to the necessity of enacting adequate legislation for their protection. Having obtained such legislation, we must then exercise an impelling influence that will witness law enforcement. Our newly created Legislative Commission is dealing with this problem. That Commission requires and needs our unreserved support.

(D)

PUBLIC HEALTH MOVEMENTS

The work of our State Department of Health, and its local representatives and the programs, policies and work of state organizations concerned and dealing with health problems, merit our closest contact and participating assistance. We cannot well remain apart from their work. Especially should the present intimate and cordial relationship with our State Department of Health and Commissioner of Health be conserved and enhanced to fullest degree.

(E)

MEDICAL EDUCATION

Our University Department of Medicine, Hospital and Post-graduate Department contains an impressive opportunity for co-operative activity that will eventuate in the institution of a medical educational center for the providing of exceptional opportunities for not only our members, but also the profession of the nation. In the formulation of policies, the operating of departments, the formulation of extension work, our Society must not only seek, but also manifest a helping influence.

These outstanding five general objects of organizational concern demand our aggressive consideration and action. In doing so we must in no way relinquish our present work that includes Medical-Legal Defense, The Journal, Endowment Foundation, and those other undertakings that have been and are receiving our attention.

If we are agreed that such a program is rightly and by necessity the proper concern of our State Society, then the following deduction is germane:

1st. No one individual is humanly competent, nor does he possess the time to make it possible to guide, direct and institute administrative supervision, dispose of the executive and operating problems, solve the daily questions that will arise in extending the work, and supply initiative to enlist support.

2nd. To embrace, as we must, such a program of Society work entails financial expense. We can no longer draw so extensively upon the unremunerated time of members or those to whom official positions have been delegated. Your Secretary has sought to acquire a working capital. In this we have been successful to a degree. That capital must now be invested in this new program and additional funds secured for our Endowment Foundation to finance this work. It is an investment that

should be made with no taint of penuriousness. In doing so our dividends will be unestimable and our original investment will return to us greatly increased in total amount. It is my opinion that we have for too long maintained too fast a hold upon our purse strings.

Convinced with the correctness of these premises I respectfully submit for your most careful consideration and institution the following recommendations:

1. That the scientific editorship of The Journal be divorced from the office of the Secretary and that an Editor be elected who shall be charged with the sole duty of editing the scientific pages of The Journal, including the editorial pages up to the Editorial Comments and Society News of our present style and form of publication. That the business, advertising, printing and mailing of The Journal remain in the office and under the management of the Secretary. This innovation will relieve the Secretary of a vast amount of time-consuming work that will enable him to give more detailed attention to the afore enumerated objects and scope of Society activity.

2. That your Secretary be directed to not only assume all the duties of that office, as outlined in our By-Laws, but in addition and in consultation with the Council and Executive Committee, he shall also undertake and institute the following activity:

1. Business management of The Journal and editing of the Department of Society Activities of The Journal.
2. The formulation of plans whereby expansion may be evidenced in the five cited organizational objects and in consultation with the Executive Committee, secure their attainment as speedily as possible.

These recommendations have been discussed by the Executive Committee and its endorsement has inspired your Secretary to now tender them to the Council. They constitute a direct challenge to our Society.

CONCLUSION

I would be unappreciative and negligent indeed were I to fail to record my sincere appreciation of the confidence reposed in me and the splendid assistance accorded to my endeavors by Officers, Councilors and members. Without that helpful support we would have been unable to achieve. I am profoundly grateful. To have been

able to serve is a most appreciated privilege.

Respectfully submitted,
FREDERICK C. WARNSHUIS,
Secretary-Editor.

January 6, 1928.

To the Council of the Michigan State Medical Society,

Doctor F. C. Warnshuis, Secretary,
Grand Rapids, Michigan.
Gentlemen:

Pursuant to request, we have audited the books of account and record of the *Michigan State Medical Society* for the period from December 30, 1926, to December 29, 1927, and submit herewith our report.

Our examination included, in addition to a verification of the assets and liabilities of the Society at December 27, 1927, a comprehensive test check of the recorded cash transactions, operating accounts and other data for the period. While we did not make a detailed examination of all the cash transactions and operating accounts, it is our opinion that the tests made were sufficient to determine the general correctness of the records.

The assets and liabilities at December 29, 1927, are compared with those at December 29, 1926, in the summary below:

ASSETS			
	December 29, 1927	December 25, 1926	Increase *Decrease
Cash	\$ 104.38	\$ 550.61	\$ 446.23*
Accounts Receivable	768.66	1,155.05	386.39*
Securities Owned, at Cost	33,450.75	22,387.00	11,063.75
Unclipped Bond Coupons	320.00	180.00	140.00
	\$34,643.79	\$24,272.66	\$10,371.13
LIABILITIES			
Bank Overdraft	\$ 28.03	\$	\$ 28.03
Advance Payments	269.82	220.25	49.57
Reserve for Legal Defense	11,566.99	9,298.07	2,268.92
Net Worth—General	22,778.95	14,754.34	8,024.61
	\$34,643.79	\$24,272.66	\$10,371.13

The Society's policy has been to treat dues and subscriptions as income when received; accordingly, any such items unpaid at December 29, 1927, have not been included in the assets or in income.

A statement setting forth the assets and liabilities of the Society at December 29, 1927, is included in this report, subject to the following comments:

Cash on deposit at December 29, 1927, was verified by direct correspondence with the depositories and reconciliation of the amounts reported to the balances shown by the books. Recorded cash receipts for the period under audit were traced to the bank deposits as shown by bank statements on file. We thoroughly tested cash disbursements by examination of officially signed canceled bank checks, invoices and other data on file for a period of three months, and no exceptions were noted.

Accounts Receivable were proved at December 29, 1927, by trial balance of the individual accounts. However, we did not correspond with the recorded debtors to further verify the accuracy of the book records. As part of our work,

we analyzed the unpaid balances as to date of charge and have classified them as follows:

Month of Charge	Dec. 29, 1927		Dec. 29, 1926	
	Amount	Per Cent	Amount	Per Cent
December	\$ 646.91	61%	\$ 688.04	60%
November	27.85	3	45.00	4
October	22.50	2	51.36	4
September	22.50	2	10.00	1
August	16.25	1	10.00	1
July	10.00	1	29.85	3
January to June, inclusive	75.75	7	68.25	6
Prior to January 1st	246.90	23	252.55	21
Total	\$1,068.66	100%	\$1,155.05	100%

Bonds owned were verified by inspection and are shown at cost. A schedule of bonds is included elsewhere in this report.

Full provision has been made, as far as we could ascertain, for all known liabilities of the Society at December 29, 1927.

Furniture and Fixtures purchased during the period have been charged to expense in accordance with the established practice.

We have included as a part of this report a Statement of Income and Expense for the fiscal period ended December 29, 1927. Included also is a Statement of Cash Receipts and Disbursements of the Medico Legal Defense Fund for the fiscal period under audit. The increase in the Reserve during this period represents the net gain from the operation of this fund and is summarized as follows:

Net Assets of Medico Legal Defense Fund at December 29, 1926	\$ 9,298.07
Plus: Net Gain from December 30, 1926 to December 29, 1927	2,268.92

Reserve for Medico Legal Defense Fund December 29, 1927	\$11,566.99
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We Hereby Certify that we have audited the books of account and record of the *Michigan State Medical Society* for the period from December 30, 1926, to December 29, 1927, as herein outlined and that, in our opinion, based upon the records examined and information obtained by us, the accompanying Statement of Assets and Liabilities is drawn up so as to set forth correctly the financial condition of the Society at the date named and that the relative operating statement is correct.

Very truly yours,
ERNST & ERNST,
Certified Public Accountants.

(SEAL)

STATEMENT OF ASSETS AND LIABILITIES
Michigan State Medical Society
At the Close of Business December 29, 1927.

ASSETS	
CASH	
Undeposited Receipts	\$ 11.25
On Deposit:	
Grand Rapids National Bank	93.13
	\$ 104.38
ACCOUNTS RECEIVABLE	
Members' and Advertisers' Accounts	\$ 1,068.66
Less: Allowance for Doubtful Accounts	300.00
	\$ 768.66
SECURITIES OWNED—At Cost	\$33,450.75
UNCLIPPED BOND COUPONS	320.00
	\$34,643.79
LIABILITIES	
ACCOUNTS PAYABLE	
Bank Overdraft	\$ 28.03
ADVANCE PAYMENTS	
Members' Reprint Prepayments	269.82

RESERVE		
For Legal Defence.....	11,566.99	
NET WORTH		
Balance—December 29, 1926.....	\$14,754.34	
Net Income for the Fiscal Period		
ended December 29, 1927.....	8,024.61	22,778.95
		\$34,643.79

(Note A) This statement is subject to the comments contained in our "Certificate" included in and made a part of this report.

INCOME AND EXPENSE

Michigan State Medical Society

For the Period from December 30, 1926 to December 29, 1927

INCOME

Membership Dues	\$17,696.50	
Advertising	8,447.48	
Journal Subscriptions	8,206.42	
Reprint Sales	3,114.50	
Interest on Investments.....	1,128.10	
Profit on Sale of Securities.....	216.00	
		\$38,809.00

EXPENSE

Salary—Editor	\$ 4,000.00	
Salary—Stenographer	2,440.00	
Journal Expense	10,751.41	
Reprint Expense	3,003.60	
Society Expense	4,945.50	
Post-Graduate Medical Conferences.....	2,145.45	
Office Rental and Telephone.....	1,200.00	
Council Expense	730.67	
Annual Meeting Expense.....	603.56	
Postage and Printing.....	378.00	
Delegates to American Medical Association	286.20	
Provision for Loss on Doubtful Accounts	300.00	30,784.39
NET INCOME.....		\$ 8,024.61

INCOME AND EXPENSE—MEDICO LEGAL
DEFENSE FUND*Michigan State Medical Society*

For the Period from December 30, 1926 to December 29, 1927

INCOME

Dues	\$6,450.42	
Interest on Securities.....	558.69	
Profit on Sale of Securities.....	50.00	
		\$7,059.11

EXPENSE

Legal Fees.....	4,790.19	
NET GAIN		\$2,268.92

SUMMARY OF CASH RECEIPTS AND DISBURSEMENTS
—MEDICO LEGAL DEFENSE FUND*Michigan State Medical Society*

For the Period from December 30, 1926 to December 29, 1927, inclusive.

BALANCE—December 30, 1926..... \$496.07

RECEIPTS

1927		
Jan. 6, Interest on Bonds.....	\$ 30.00	
Jan. 31, Dues Received during January	934.00	
Feb. 28, Dues Received during February	1,508.00	
Feb. 28, Profit on Sale of Community Power and Light Company Bonds	50.00	
Feb. 28, Interest on Bonds.....	23.07	
Mar. 30, Dues Received during March	1,450.00	
Mar. 30, Interest on Bonds.....	215.00	
Apr. 30, Dues Received during April	1,301.75	
May 31, Dues Received during May	536.25	
June 30, Dues Received during June	45.00	

July 30, Dues Received during July	105.00	
Aug. 30, Dues Received during August	98.00	
Sept. 30, Dues Received during September	44.92	
Sept. 30, Interest on Bonds.....	242.50	
Oct. 31, Dues Received during October	232.75	
Oct. 31, Interest on Bonds.....	110.00	
Oct. 31, County of Alcona Bond Paid	500.00	
Nov. 30, Dues Received during November	37.75	
Dec. 31, Dues Received during December	157.00	\$7,620.99

DISBURSEMENTS

Jan. 19, F. B. Tibbals.....	\$ 505.00	
Jan. 26, Harry C. Howard.....	100.00	
Jan. 26, Douglas, Barbour, Brown and Rogers.....	500.00	
Feb. 24, Peoples Light and Power Co. Bond Purchased	970.00	
Feb. 24, Accrued Interest on above Bond	7.64	
Feb. 24, Douglas, Barbour, Brown and Rogers.....	165.00	
Mar. 30, Douglas, Barbour, Brown and Rogers.....	150.00	
Mar. 30, Grand Rapids Affiliated Corp. Bond Purchased	1,000.00	
Mar. 30, Accrued Interest on above Bond	22.08	
Apr. 30, County of Alcona Bond Purchased	500.00	
Apr. 30, Accrued Interest on above Bond	32.16	
Apr. 30, F. B. Tibbals.....	500.00	
Apr. 30, Douglas, Barbour, Brown and Rogers.....	500.00	
May 31, Douglas, Barbour, Brown and Rogers.....	1,019.38	
June 30, Douglas, Barbour, Brown and Rogers.....	127.00	
Aug. 23, Douglas, Barbour, Brown and Rogers.....	555.15	
Dec. 2, Meridith P. Sawyer.....	131.25	
Dec. 2, Douglas, Barbour, Brown and Rogers.....	205.06	
Dec. 29, Douglas, Barbour, Brown and Rogers.....	332.35	7,322.07 298.92

BALANCE—December 28, 1927..... \$794.99*

(Note *) The cash balances of the Society's regular account and the Legal Defense Fund are carried together. In order to avoid sale of securities, monies belonging to the Defense Fund have been used to pay accounts of the Society, this to be reimbursed from future receipts. Therefore, the balance at December 29, 1927 represents cash due from the general funds of the Society.

SECURITIES OWNED

Michigan State Medical Society

December 29, 1927

Security	Interest Rate	Maturity	Par Value	Cost
United Light and Power Company	5½%	1959	\$ 2,000.00	\$ 1,850.00
National Electric Power Company	6	1945	5,000.00	4,810.00
Pennsylvania Gas & Electric Company	6	1940	3,000.00	2,850.00
Michigan Fuel and Light Company	6	1950	3,000.00	2,985.00
Hudson Valley Coke and Products Co.	7	1930	1,000.00	1,000.00
Hudson Valley Coke and Products Co.	7	1939	1,000.00	1,000.00
Peoples Light and Power Corporation	5½%	1941	2,000.00	1,940.00
Republic of Panama.....	6½	1956	2,000.00	2,060.00
No. 50 Broadway Building.....	6	1946	2,000.00	2,000.00
Pennsylvania Railroad Company	5	1964	3,000.00	3,093.75
Grand Rapids Affiliated Corporation	5	1955	2,000.00	2,000.00
Consolidated Public Service Company	5	1928	3,000.00	2,970.00
General Motors Acceptance Corporation	5	1931	5,000.00	4,892.00
			\$34,000.00	\$33,450.75

6. On motion of Boys-Heavenrich, September was selected as the month for the holding of the 1928 Annual Meeting, the exact date to be left to the Executive Committee and the Secretary.

7. On motion of Charters-Rickers, the Secretary was authorized to exercise his own judgment in the making of arrangements of clinics, scientific and commercial exhibits in connection with the Annual Meeting.

8. On motion of Le Fevre-Powers, the matter submitted by the Medical Legal Committee relative to the defense of a member arrested under a criminal suit was laid upon the table.

9. The Secretary was directed, on motion of Burke-Ricker, to write to the officers of the Medical Protective Company, setting forth the dissatisfaction regarding their failure to co-operate with our Medical Legal Committee and to seek to secure an understanding that will cause a more cordial relationship to exist.

10. Upon motion of Urmston-Van Leuven, the Medical Legal Committee was instructed to not provide medical legal protection for non-resident members. The Secretary was authorized to formulate an amendment to the By-Laws to cover this clause and to submit the same at the next session of the House of Delegates.

11. On motion of Ricker-Heavenrich, the Secretary was requested to urge the Medical Legal Committee to utilize more fully the service, whenever required, of the County Societies representatives of the Medical Legal Committee.

12. On motion of Bruce-Charters, the office of Secretary-Editor was divorced in compliance with the recommendations that were made by the Secretary-Editor in his Annual Report.

13. The Chairman of the Finance Committee submitted the following report which was adopted upon motion of Le Fevre-Green:

FINANCE COMMITTEE

To the Members of the Council:

Your Finance Committee have received carefully the financial report as submitted by the Secretary-Editor in his Annual Report, and attested and audited by the Society's financial auditors, Ernst and Ernst. We therefore submit the following recommendations:

1. That the Secretary-Editor's financial statement be approved as certified to by the Auditors.

2. That we commend the financial management that has made possible this showing for the official year of 1927.

3. We recommend the adoption of the budget as submitted by the Secretary-Editor.

4. We recommend that the salary of the Secretary for 1928 shall be in the amount of \$5,000.

5. We recommend that when a literary editor has been appointed by the Council and the Publication Committee that his salary shall be in the amount of \$2,500 per year plus an allowance of \$1,200.00 for stenographer and postage expense.

6. We recommend that the salary and expenses of the literary editor be charged to the Journal account and that one-third of the salary of the Secretary shall be charged to the Journal account.

7. We recommend that the Secretary be authorized to sign the vouchers of the Society; that in lieu of the signatures of the Treasurer and the Chairman of the Council that a statement of monthly expenditures shall be submitted to the Chairman of the Council and the Executive Committee.

8. It will be noted that in several different accounts of the Society that one or two of the Councilors and Officers received varying sums each month. It is but just that the explanation should be made that these vouchers were for the reimbursement of Officers and Councilors who advanced from their personal funds the expense of meetings and hotels not only for themselves, but also for others who attended these meetings. It is deemed that this explanation should be made at this time in order that false impression be not gained that these amounts were for individual Officers and Councilors.

Detroit Clinical Bulletin will receive \$598.00.

Respectfully submitted,

Geo. L. Le Fevre, Chairman.
J. Hamilton Charters.

14. The Chairman of the County Society Committee reported as follows, which report was adopted on Motion of Boys-Burke.

COUNTY SOCIETY COMMITTEE

To Members of the Council,
Michigan State Medical Society.

The Committee on County Societies beg leave to submit the following report:

As the Michigan State Medical Society becomes more and more active in broad sociological and health problems; as its viewpoint in regard to the responsibility which it thinks it should accept, and its influence enlarges, it must not be forgotten that after all the strength of the Society lies in the county unit. Only as the county unit is solidified into a compact body interested in the progress of medicine in general, and in particular in improving the professional qualifications of its members, will the state society be able to reflect this position and exert its influence in a larger field.

We are pleased to be able to report that on the whole 1927 has been a most satisfactory year; that for the most part the county societies report a year of unusual and most satisfactory activity. The county societies in District No. 13, the Pe-

toskey region, continues to be one of the weak spots in the organization. We have, at the present time, a membership of 3,242, a gain of 178 members, a gross gain of 215 members since we were so unfortunate as to lose by death 37 of our confreres.

If the minimum program planned has not, in every county, worked out perfectly satisfactorily, yet the county societies, as never before, have had a planned program which has been carried through satisfactorily. We believe that the annual County Secretaries' Conference does much to stimulate the secretary to be forehanded in his program planning, and we recommend that the secretary, with the president, be authorized to designate the time and place for the 1928 conference and to arrange such a program as they deem most suitable.

From certain counties we hear of dissatisfaction in reference to their geographical district. This is especially true of Oakland County. It might be well for the Council to consider the advisability of setting Wayne County aside as an individual Councilor district. We present for your consideration the advisability of amalgamating Cass County, District No. 4, with a convenient neighbor society; likewise, the advisability of amalgamating Benzie County, District No. 9, with Grand Traverse, and the advisability of transferring Mason County, District No. 9, to another district.

This year, as usual, one of the most important activities of the state society has been the Post-Graduate Conference. Last year in my report I made mention of my concern that the frequency of the Post-Graduate Conferences might cause them to be received with a less degree of enthusiasm. So far as we can tell, the conferences have been, this year, just as enthusiastically received, the attendance has been just as good as at any time since we first started to put them on. This year there have been essentially district conferences put on with the co-operation of the councilor and the secretary of the society of the county in which they were held. These men and their local confreres have given freely of their time and effort, and the results have spoken for themselves. With the exception of the Seventh district, where a conference was given in December, 1926, each district has had some kind of a clinic. District No. 3 had an orthopedic clinic independent of the Post-Graduate Conference. District No. 4 had two clinics under the auspices of the Kalamazoo Academy of Medicine. District No. 9 had two Post-Graduate Conferences. We recommend that this coming year we again enter the Upper Peninsula, giving three or four conferences. This year, at the suggestion of the councilor, only one clinic was held there. We suggest that hospital clinics, lasting two or three days, be given in four of the larger cities of the state outside of Detroit.

The committee has been advised that there will be brought before you, for your consideration, the question of the advisability of amalgamating the Post-Graduate Conferences with the Post-Graduate school. A joint committee, representing both the Michigan State Society and the Post-Graduate Department, which has been suggested, will, no doubt, formulate a plan for the hospital clinics and the conferences. In any event, however, it would seem wise that a program be outlined by a committee in association with the secretary, and that this committee shall carry responsibility for

the personnel participating in the program and the subjects to be covered.

Respectfully submitted,

The Committee on County Societies.

Burton R. Corbus, Chairman.

O. L. Ricker.

C. E. Boys.

15. On motion of Bruce-Heavenrich, a Council on Post-Graduate Medical instruction was formed to be composed of representatives of the Michigan State Medical Society and the Department of Post-Graduate Medicine of the University of Michigan. This Council to be constituted of the following membership: The Director of Post-Graduate Department of Medicine of the University of Michigan; Secretary of the State Medical Society; Chairman of the State Society's permanent committee on Medical Education; the Chairman of the Council's Committee on County Society Work, and the editor of the Journal. This committee to be in supervisory charge and control of the program of Post-Graduate Medical Instruction of the State Society, and is authorized to select such additional members as their chairman and the progress of the work may deem to be expedient.

16. On motion of Le Fevre-Urmston, the members of the Executive Committee of the Medical Legal Committee were re-elected:

F. B. Tibbals, 1932, Detroit.

J. D. Bruce, 1932, Ann Arbor.

J. G. R. Manwaring, 1932, Flint.

Angus McLean, 1932, Detroit.

W. J. Stapleton, 1932, Detroit.

17. Publication Committee report:

PUBLICATION COMMITTEE

The Publication Committee feels privileged to offer its congratulations to the Council on the conduct of its official publication. The Secretary-Editor has been kind enough to acknowledge helpful service on the part of this committee. We are glad to offer our appreciation for the painstaking consideration with which he has performed his many duties. The last few years and the year just passed, in particular, have seen a rapid expansion in the educational program of the Society but at no time has there been any hesitancy on the part of our Secretary-Editor in responding to the increasing calls upon his time. Those of us in close contact with his work realize how inadequately he has been compensated. The fact that he has never complained ought not to have blinded us to the propriety of a more material recognition of his value to this organization. The division of labor in the Secretary-Editorship which Dr. Warnshuis suggests seems to your

committee a very happy solution of a difficult problem. In relieving Dr. Warnshuis of the duties of editor it permits him to become increasingly useful in the organization of the broad program of educational development which the Society plans in conjunction with various medical organizations throughout the state. The duties of secretary and of editor call for qualities and qualifications rarely found in one person and the plan of enlisting the services of one especially qualified in each of these important fields is ably sustained in Dr. Warnshuis' presentation. That such a plan is financially possible is due largely to the business-like manner in which the Journal has been developed.

Referring to that part of the Secretary-Editor's address which concerns the division of duties between the secretary and the editor, this committee is in general agreement. We understand, however, that insofar as the respective duties are not specified in the Constitution of the Society, these offices will be operated under the supervision of the Council and its Publication Committee.

Your committee regards the copyrighting of the Journal as a most important matter. Under the most discriminating supervision, an article might be admitted to its columns which the author or other interested parties might use to exploit a questionable enterprise. This may be quite effectively controlled through the protection of the copyright.

(Signed) The Publication Committee

James D. Bruce, M. D.

Burt F. Green, M. D.

Buell H. VanLeuven, M. D.

18. Upon motion of Le Fevre-Burke, F. C. Warnshuis was re-elected as Secretary.

19. On motion of Ricker-Powers, John R. Rogers was elected Treasurer.

20. On motion of Charters-Heavenrich, John H. Dempster of Detroit was elected as Scientific Editor of the Journal.

21. On motion of Le Fevre-Urmston, an honorarium of \$100.00 was voted to the Treasurer of the Society for his services.

22. On motion of Le Fevre-Van Leuven, \$1,000 was appropriated for the expenses of the Joint Committee on Public Health Education.

23. Dr. J. B. Jackson presented before the Council certain activities of the Optometrists and also of the Gorgas Memorial, which were discussed and on motion of Green-Powers the Secretary was instructed to investigate and obtain additional information upon the activities of the Optometrists and submit the same to the Executive Committee. He was also instructed to secure copies of the action taken by the American Medical Association relative to the Gorgas Memorial and to transmit that information to our members through the Journal and by com-

munication to the Secretaries of County Societies, advising them that this is the attitude of the State Medical Society and is tendered to them for their information and guidance.

24. On motion of Le Fevre-Charters, \$598.00 was appropriated for the Detroit Clinical Bulletin.

There being no further business, the Council adjourned at 4 p. m.

F. C. Warnshuis, Secretary.

"ABDOMINAL PAIN OF THROAT INFECTIONS IN CHILDREN," AND APPENDICITIS

Joseph Brennemann, Chicago (Journal A. M. A., December 24, 1927), is convinced that many cases of appendicitis in children occur during, and as a complication of, or a sequel to, an infection in the throat. Of thirty-five cases of appendicitis in which operation has been performed, 17 per cent unquestionably occurred during the course of very evident throat infections. At least an equal number were suggestive. Of some twenty-two leading pediatric textbooks, only seven mentioned these infections as a possible cause of appendicitis. At the University of Wisconsin, Evans reported on the incidence of appendicitis and of "pyogenic infections of the upper respiratory tract" among 16,000 students who attended the university during the period from February, 1910, to June, 1916. During this period of six and one-third years, or fifty-nine school months, there were 236 cases of acute appendicitis, an average of four cases a month, or one in seven and one-half days. During this time there were eight distinct periods of marked simultaneous increase above the average, or expectant, rate of both appendicitis and upper respiratory tract infections. Instead of an average of four cases a month, the incidence in successive periods of simultaneous increase rose to eight cases in fourteen days; six cases in thirteen days; thirteen cases in thirty-two days; twenty-seven cases in fifty-two days; twenty-one cases in forty-three days; fourteen cases in twenty-four days, and eighteen cases in twenty-six days. In other words, there were 113 cases of appendicitis in 226 epidemic days, as compared with 113 cases in about 1,600 nonepidemic days, or about eight times as many in the same number of days. Evans states that 86 per cent of the total number of cases of appendicitis showed a "demonstrable primary upper respiratory tract infection." In the group of 113 cases occurring during the eight epidemic periods, the increase of throat infections rose to 93 per cent. That there is a greater "tropism" for the appendix during epidemic periods Evans thinks is further shown by the fact that of the total number of students who reported to the clinic for upper respiratory tract infections, only 1.5 per cent developed appendicitis, as compared with 3 to 3.5 per cent of those so reporting during periods of increased frequency. From this and other evidences, Brennemann says, it is obvious that the evidence concerning a pathogenic relationship between appendicitis and upper respiratory tract infections varies so greatly that unexceptionable conclusions as to the relative frequency and relative importance of such a relationship cannot as yet be made. That such a relationship exists frequently enough seems more than probable.

EDITORIAL DEPARTMENT

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

ADDRESS ALL COMMUNICATIONS TO THE EDITOR—1508 G. R. NAT'L BANK BLDG., GRAND RAPIDS, MICH.

ANNUAL MEETING OF COUNCIL

This issue contains the official minutes of the January meeting of the Council and the Secretary-Editors Annual Report. We urge that every member carefully read these minutes and that report. *They contain radical changes in our Society's policy and program.* You want to know what they are and how they pertain to you. Careful reading will impart that information. Especially do we refer to the Secretary's report dealing with administrative policies and to the minutes which impart the creation of a Council on Post Graduate Medical Instruction. County Society officers are requested to draw their members' attention to this issue of The Journal and the Council's minutes.

NOTICE

Commencing with the March issue, Dr. J. H. Dempster, David Whitney Bldg., Detroit, will assume his duties as Editor of The Journal. In the future all matters and correspondence pertaining to original articles, case reports, editorials should be addressed to Dr. Dempster. Manuscripts, case reports, comments are to be directly submitted to Dr. Dempster.

In the matters of change of address, subscription, advertisements and all business details, communications should be addressed to Dr. F. C. Warnshuis, Secretary, Grand Rapids National Bank Bldg., Grand Rapids.

County Secretaries are advised that monthly report of their meetings, notice of deaths and monthly reports and remittances are to be sent to the Secretary, F. C. Warnshuis.

VALEDICTUM

For sixteen years it has been my esteemed privilege to edit The Journal and serve as its business manager. Annually, in our Secretary-Editor's report, we imparted policies, ideals and actualities that influenced us in the formulation as well as discharge of our editorial duties. In this

then, our editorial valedictory, do we refrain from stating anew the ideals and policies under which we sought to serve.

Sixteen years is a long time. Sixteen years is the longest editor's tenureship in the history of our Society. Sixteen years of editing sixteen volumes of our Journal represents a tremendous amount of time and labor devoted to preparation and supervision of some 16,000 pages of printed matter. We are unable to estimate the time consumed, the labor entailed or the effort expended, to say nothing of exacting details or the worries that attend an editor's task. We did the best we knew how; we served and ever considered it a privilege to be permitted to so serve. Therefor, at this time, we purpose no summarization of the work, no comparison of issues of sixteen years ago, of expansion, style or appraisal of the intrinsic value of each volume. All that we leave to our members and readers. The sixteen volumes supply their own merits or demerits.

Thus, as we voluntarily lay aside, and pass on to an able successor, our editorial role we find ourselves confronted with many reflections which, on more mature deliberation, we prefer to remain silent upon. So we lay aside the figurative editorial pen but ere doing so we purpose an expression of appreciation.

We cannot adequately voice our gratefulness for the many kindnesses that have been accorded and which have inspired as well as made pleasant our editorial work. To all who thus assisted us we say "thank you" with deepest, heartfelt meaning. That which was attained would not have been possible without such friendly support. We are profoundly grateful—you aided, you encouraged, you inspired more than you really knew. Our memory will never permit us to forget the manner and degree of your helpfulness.

We shall ever cherish the trust that was reposed in us by the succeeding members of the Council who served on the Council during these sixteen years. We record our personal appreciation to them and to the sixteen Presidents under whom we served.

To these officials we tender equally profound gratitude and hearty thanks for their confidence and extremely helpful assistance.

And now nothing is left but to say *vale*. However, we are not severing all relationship with The Journal. Under the new plan of management we shall continue to conduct the department of "Society Activity" and through that department impart comments and outlines of State Society activity. We are also continuing in directing the business management of The Journal which entails supervision of printing, advertisements, subscriptions and mailing. Hence this is but a partial valedictory and our "*vale*" pertains only to the scientific and literary editorship.

To our successor, Dr. Dempster, we subscribe unreserved support and purpose to aid him in every possible way to make our Journal of increasingly intensive value and interest to our members. We bespeak similar support for him from all officers and members. We rejoice because of so capable a successor and congratulate the Society in obtaining his editorial services. It's going to be a better, bigger, more valuable Journal. Read it diligently and subscribe your individual support to Dr. Dempster's editorship.

OUR SUCCESSOR—J. H. DEMPSTER



In the election of James Herbert Dempster, M.D., to the Editorship of The Journal

our Society places into the Editor's chair an esteemed member splendidly endowed with educational, professional experience, and judgment qualifications to ably assume the duties of his office. He needs no introduction, still we take extreme delight in presenting him to our readers. We are confident that under his editorship The Journal will be of exceptional interest and value to our members.

For the information of our members, we appended a "Who's Who" sketch of some of his attainments and achievements.

DEMPSTER, JAMES HERBERT:

Born Aylmer, Ontario, Canada, May 12, 1873; came to United States, 1905; naturalized 1917; son of Archibald F. and Catherine (Campbell) Dempster; educated Ridgetown, Ontario, high school; A. B. 1899, Queen's University, Kingston, Canada; M.D. 1909; Detroit College of Medicine and Surgery; (F.A.C.P.) Fellow of the American College of Physicians, 1920; married Feb. 3, 1903, Nellie May Taylor, London, Canada; Edited Detroit Medical Journal, 1910-18; Assistant Editor London, Ontario, Advertiser, 1900-1912; Editor of the Windsor Daily Record, 1902-1905; Studied medicine Detroit College of Medicine, 1905-1909; Instructor of physiology in Detroit College of Medicine, 1912-15; confined work to roentgenology since 1917; appointed chief of the department of roentgenology, Detroit College of Medicine, 1922; member (A.A.A.S.) American Association for the Advancement of Science; Wayne County Medical Society; Secretary Wayne County Medical Society, 1918-19; Vice-President Wayne County Medical Society, 1920-22; Vice-President Wayne County Medical Society a second time, 1925-26; President Wayne County Medical Society, 1926-27; member American Radiological Society; Michigan State Medical Society; American Medical Association; Detroit Medical Club; Detroit X-ray and Radium Society; Author: Pathfinders of Physiology, and numerous papers on internal medicine, also on subjects in the field of radiology, published in medical journals. Member Masons (32nd degree), Moslem Shrine, Ionic Blue Lodge Mason, Michigan Sovereign Consistory. Republican leaning; Unitarian. Residence, 1967 Lawrence avenue, Detroit, Mich. Office 641 David Whitney Bldg., Detroit, Mich.

EDITORIAL COMMENTS

We have intentionally omitted the customary Editorial Comments in this issue for the reason that we desire every member to carefully read the minutes of the January meeting of The Council. We welcome your reaction to these new policies.

DUES

Your 1928 Annual Dues are now payable to your local secretary. Please aid him in his work by the prompt mailing of your check. Do not make it necessary for him to dun you for your dues.

MINUTES OF THE MEETING OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION

DETROIT, JANUARY 11, 1928

1. This meeting was held in conjunction with the State Medical Society Council at the Book-Cadillac Hotel, Detroit. The following members of the Joint Committee were present: Doctors Little, Jackson, Warnshuis, Biddle, McLean, Sundwall, Bruce, Haynes, Landers, Stapleton, Henderson, and Mr. Werle, Miss Ross, and Miss Anderson.

2. Reading of the minutes of the November meeting.

3. Report of the Committee on Publicity. This Committee consists of the following members: Doctors Jackson, Sundwall, Bruce, Haynes, Cabot, Landers, Biddle, Henderson, and Mr. Werle. For the benefit of the members of the Council Dr. Jackson, Chairman of the Committee, gave a brief outline of the activities of the Publicity Committee since the time of its organization.

On behalf of his Committee he made the following recommendations with reference to a future publicity program through the newspapers of the state: First, that the Committee on Publicity be made a standing committee, with the recommendation that Dr. Bruce be made Director of Publicity, with instructions to work out and carry on a newspaper publicity program. Second, that the State Hospital Association be invited to become a unit member of the Joint Committee on Public Health Education. And third, that a publicity fund amounting to \$2,500 be set aside for publicity purposes for next year. The sources of this proposed fund were designated as follows: State Medical Society, \$1,000; University of Michigan, \$500; State Dental Society, \$500; State Tuberculosis Association, \$300; State Hospital Association, \$200.

Dr. Jackson pointed out that in addition to the \$500 designated above, the University of Michigan was giving the services of Dr. Bruce as Director of Publicity.

It was voted to deposit the proposed fund with the Secretary of the State Medical Society, this fund to be drawn upon by the Director of Publicity as occasion demanded.

4. The Secretary was instructed to communicate with Dr. Lyons and Dr. Davis of the State Dental Society with references to the selection of the dental subjects for next year's lecture program.

5. The following committee was appointed to act in the selection of medical subjects for the high school lecture program for next year: Doctors Biddle, McLean, Warnshuis and Jackson.

6. It was voted to hold the next meeting at Ann Arbor in May, subject to the call of the Secretary.

The meeting adjourned.

W. D. Henderson, Secretary.

CLINICAL LABORATORY SERVICE IN THE UNITED STATES

Statement by the Council on Medical Education and Hospitals

During the last decade there has been such discussion in medical and laboratory journals and particularly on the platform of medical and laboratory conventions, regarding the status of the clinical laboratories of the country. Especially it was regretted that the practice of clinical pathology, regarded as one of the medical specialties, had fallen into disrepute. The fact was lamented that the laboratory work had fallen into the hands of lay technicians and become the toy of persons who had a purely commercial point of view and very little training for the work. Much disgust and quite a strong note of despair was sounded by those few members of the medical profession who had championed the cause of clinical pathology and had adopted that specialty as a life work.

Many letters were received at the office of the American Medical Association from practitioners of pathology and leaders in medicine, regretting the drift toward lay commercialism, and urging that something be done to counteract it. What to do about it was a question. Organizations of chemists were interested because some of their members ran laboratories. Likewise, organizations of clinical pathologists, bacteriologists, and of the medical profession were equally interested. Some of these organizations working alone undertook to investigate and to standardize the practice of clinical pathology, hoping to check the drift of that practice into the hands of technicians and restore it to its rightful place as a medical specialty. The efforts of those organizations working single-handed were of little or no avail except to emphasize the enormity of the task and the necessity for co-operation.

CO-OPERATION EFFECTED IN 1923

The necessary co-operation of the laboratory and medical organizations was brought about in 1923 at the annual meet-

ing of the American Medical Association in San Francisco. At that time, delegates sent by the American Chemical Society and the American Association of Pathologists and Bacteriologists separately petitioned the American Medical Association to establish some supervision over clinical laboratories. This led to the appointment of three committees representing the American Chemical Society, the American Association of Pathologists and Bacteriologists, and the Council on Medical Education and Hospitals. At a joint meeting of these committees in Chicago early in 1924, after much deliberation, certain basic principles underlying sound laboratory service were agreed upon which stressed specially a qualified bona fide director as the prime essential. The joint committee agreed that the work could best be conducted by the Council on Medical Education and Hospitals.

The first steps were: (a) to secure a complete list of laboratories in the country; (b) the preparation of a schedule of essentials in an approved clinical laboratory, and (c) the preparation of a questionnaire by which the essential facts regarding each laboratory could be obtained. Each of these measures was carried out with the advice and co-operation of fifty or more clinicians and others expert in laboratory work, including the committeemen of the above-named organizations, and by the officers of the American Society of Clinical Pathologists which very early showed an interest and from which the Council has received a hearty co-operation.

After being revised and adopted by all parties interested, the questionnaire was mailed to all the laboratories of the country and a most hearty response was received. A complete report of the survey, "Essentials of an Approved Clinical Laboratory", and a preliminary list of laboratories which appeared to be fully complying with those "Essentials", were published in the hospital number of the Journal for April 3, 1926. The facts as published were submitted to the House of Delegates of the American Medical Association at the Dallas session in 1926 and approved by that body.

To assist in giving as fair consideration as possible to each application for approval, a strong committee of laboratory experts was formed in every state or section of the country. Those committees aggregate one hundred and twenty individuals representing, as equally as possible, the

co-operating organizations and hence the interests of the laboratory profession. Under the direction of the Council, each committeeman makes his investigation and renders his report or advice independently of other committeemen in the same district.

At the present time, of the three hundred and fourteen laboratories that have reported, one hundred and fifty-one, after careful investigation, have been placed on the approved list and other applications for approval are constantly being received.

The Council lends all possible assistance to laboratories whereby they may become eligible for admission to the accepted list. Every laboratory that makes a report and signifies a desire to conform to the requirements, is informed in regard to any deficiencies. The spirit of this movement all the way through is constructive. Anyone who knows the condition of the laboratory field at the time this survey was begun, would not expect very telling or spectacular results to be shown by this time; nevertheless, there are ample reasons for believing that actual improvements are being made: (1) a number of laboratories formerly run by technicians and only nominally under "medical" directors, have come under the ownership and actual control of clinical pathologists of high professional standing and ripe experience; (2) a number of laboratories under the control of technicians have gone out of business; (3) the "Essentials" have been published repeatedly and thus brought to the attention of all persons working in the field of clinical pathology; (4) there is an increased demand for pathologists to man the clinical laboratories of the country; (5) the director of the Mayo Foundation says that the salaries offered the pathological graduates of the Foundation are double those offered to other graduates of the Foundation; (6) the feeling of unsteadiness indicated in the discussions of a few years ago has subsided to a considerable degree, and there is more hopeful attitude on the part of the clinical pathologists themselves.

FUTURE OUTLOOK

The movement is still in its beginning, but a good start has been made. To what extent doctors have actually discontinued sending specimens to unapproved laboratories and are sending them to approved laboratories is not known. The educational results, however, are becoming increasingly evident. In order to secure the best analyses for the benefit of their pa-

tients as well as to best conserve the interests of the medical profession, physicians should refuse to have their work done at laboratories conducted under the direction of non-medical individuals. Much depends, also, on the continued hearty support of the various organizations and individuals who operate in the laboratory field. That this is already assured is indicated by the promptness with which laboratories are filling out and returning the form that has recently been mailed out by the Council on Medical Education and Hospitals for a complete and needed resurvey of laboratory service. The resulting data from this survey will be published for the benefit of all. Of course, any laboratories that are not yet on the list will be promptly considered for approval, if they express such a desire.

MEDICAL LIBRARY

Within the past year the Wayne County Medical Library has been enriched by several munificent gifts and endowments. This library was formerly owned and managed by the County Medical Society at the Society building, 65 High street, East, Detroit. An historical sketch will appear in the next number of this Journal. On July 1st, 1923, at the request of the Wayne County Medical Society the city library commission took over the medical library under the designation of the Medical Science Department of the Public Library. During the year 1927, Mayor John W. Smith with the co-operation of the Common Council of Detroit, granted the Library Commission the sum of \$12,500 to be expended on books and periodicals. This is the fourth part of a sum of \$50,000 that was asked by the library committee of the Wayne County Medical Society to cover a period of four years. The Medical Society has contributed 10 per cent or \$1,250 to the Library Commission to be devoted to the same purpose. The Library Commission has inserted the sum of \$12,500 in its budget for the year 1928-29.

This munificence on the part of the Mayor and the Common Council is deeply appreciated by the medical profession of Wayne County. Other citizens as well as the medical profession are free to make use of the Medical Science Department, and according to periodic reports of the Librarian the medical department is well patronized.

The most recent benefaction is from Mrs. Clarence A. Lightner, daughter of the

late Dr. Theodore McGraw, Sr., and from Mrs. Theodore A. McGraw, Jr., namely \$20,000 placed with the Detroit Trust company. The income therefrom is to be used for the purchase of books and periodicals, together with an additional sum of 1,000 given to bring the collection up to date. The gift is to commemorate the memory of the late Dr. Theodore A. McGraw, Sr., and Dr. Theodore A. McGraw, Jr., and will be devoted to the purchase of literature relative to surgery of the thyroid gland and also literature bearing upon endocrinology. It is well known that Dr. Theodore A. McGraw, Jr. devoted his attention exclusively during the latter years of his life to a study of the internal secretions.

The donors of these gifts toward the advancement of scientific medicine deserve the commendation of the medical profession of this state, the Library Commission and the Wayne County Medical Society as well. To the beneficiaries we extend our congratulations.

THE JOURNAL
IS
YOUR FORUM—
WE INVITE YOU
TO UTILIZE
IT FOR THE
EXPRESSION OF
YOUR VIEWS
ON
MEDICAL SUBJECTS

OUR OPEN FORUM

Affording Opportunity for Personal Expression

MEDICAL SOCIETY OF NEW JERSEY

Editor of The Journal:

Received this morning your letter of January 17 and have passed on to the Chairman of our Board of Publication a request that Dr. Dempster's name shall be placed on our regular exchange list. I want to take this occasion to thank you for the regular receipt of the Michigan Journal and to tell you that I "give it the once over" every month as soon as it arrives and that I derive much help therefrom. I suppose I should say that I am sorry you are relinquishing the editorship but knowing how many other things you have to do and feeling keenly the strain of all such work, I rather congratulate you on being able to lay down some of your many duties.

With kindest regards,

Sincerely yours,

Henry O. Reik, M. D., Editor.

ANOTHER READER

Editor of The Journal:

December number the best ever. No uplift welfare on "What Shall the Doctors Do to Be Saved" stuff. All good practical medical information. It is a good one. Success and All the Season's Happiness.

R. H. Wood, M. D.

MEDICAL GUIDANCE

Editor of The Journal:

I see by the paragraph in the November Journal that you have been thinking of the question I asked you, how shall reliable information on the standing of the individual doctor be made available to the public. I think I should have said a knowledge of his training and fitness to treat disease be made available to the public, and not be advertising. I think it could be easily arranged. It is not contrary to ethics and made mandatory by the law to put your credentials, otherwise your license to practice medicine on the records, where it becomes public property available to all who desire to examine it. If we go a little farther and make it mandatory that all P. G. work done must be put on record, that the doctor must make his library and journal list a matter of record, in fact all information relating to the individual M. D.'s progress can be made a matter of record, then the public will have information that is dependable to aid them in making a choice of their physician, and this will not be advertising.

In the December Journal Dr. J. D. Brooks says he believes in advertising, that without advertising business will not be very successful and he says that the practice of medicine is not all science, a goodly part is business. He thinks the advertising for the doctors must be group advertising, not individual paid advertising. Group advertising is worthless to the public in their search for a competent physician and useless to

the individual doctor to call attention to his fitness in treating disease. In reviewing the history of advertising only one evil stands out, that is the promise to cure which used to fill the pages of the papers with glaring headlines. With the promise to cure eliminated I see no harm in individual advertising as long as the advertising is kept within the limits of the recorded qualifications of the advertiser. The people consider doctors' ethics a joke and now laugh at his methods to get back into print and not violate the code.

Faternally,

Dr. Charles D. Pullen.

ADVERTISING

Editor of The Journal:

It was my pleasure to spend the Autumn visiting in California and incidentally observe the medical situation from the layman's point of view. I find the medical situation in California is what we will soon have to face unless we wake up.

The cults are growing in favor and influence very rapidly. I believe that the Pacific coast has a larger variety of cults to choose from than any other known region.

The osteopaths have had a registration law of their own for years. The chiro's stood on their constitutional rights when the legislature refused to grant them a separate law, called for a referendum vote on the question and the law was passed by a large majority. Owing to the lack of judgment by the medical profession in dealing with this question the temper of the people has become such that I think they would grant a license to any cult asking it. While visiting my brother in San Diego two cultists were arrested for practicing medicine illegally. Jury trials were demanded and both quickly freed. The last case I saw was a doctor of Sagliffology? who was arrested for violating the medical law, but the jury quickly freed him.

The cults rush into print with tales of abuse from the medical profession while ethics bar the M. D. from presenting their side of the matter to the public.

Further, Dr. Smith, chiro, who obtained his degree in a few months has just as honored a professional standing with the public as Dr. Brown, Medic, who spent years in preparation.

As I walked along the streets of San Diego I could not tell by the sign over the door whether it was the office of chiro, osteopath or medic.

I think that the medical situation in Mt. Pleasant would represent a fair average cross-section of the medical situation in Michigan outside of the large cities.

What do we find here? Our leading nose and throat specialist is an osteopath. He has a very large surgical practice. Our leading eye specialist is an optician who claims the right to the title, doctor. He treats all kinds of ocular diseases and defects with lenses, makes diagnoses of diseased conditions with the ophthalmoscope, which he refers to the medical man for treatment,

but the patient goes back to the optician to see if he thinks the M. D.'s treatment is right.

What has brought the loss of prestige to the medical profession? The use of printer's ink by the cults and the lack of the use of printer's ink by the medics.

In the January Journal Dr. W. D. Henderson says, "If the people are turning away from the medics to the cults it is the medics' fault, they have not kept in contact with the people."

In the December Journal Dr. J. D. Brook says that no business can be very successful without the help of advertising and that a goodly part of the practice of medicine is business, but he says that he is not in favor of individual paid advertising, must be group advertising.

I call your attention to the enclosed clipping from the Detroit News. The marked paragraphs explain why group advertising does not help patient or doctor.

It is individual advertising that gives the cults a professional standing, and it is only by honest individual advertising that the medical profession can hope to regain the commanding position they once occupied.

—C. D. Pullen.

THE HIGHLAND PARK PHYSICIANS CLUB

Editor of The Journal:

Please print the following notice in the next issue of The Journal:

Dr. M. A. Mortensen, Internist of the Battle Cheek Sanitarium will address the next meeting of the Highland Park Physicians' Club on Thursday, February 2, 1928, in the nurses' dining room of the Highland Park General Hospital. The subject will be "Diseases of the Aorta and Coronary Vessels."

The question of Aortic Sclerosis, Angina Pectoris and Coronary Thrombosis will be stressed and some new facts revealed.

THE HIGHLAND PARK PHYSICIANS' CLUB.

Charles J. Barone, Secretary.

THANKS AGAIN

Editor of The Journal:

I have just received your letter notifying me officially of my appointment as scientific editor of The Journal. I shall endeavor to get to Grand Rapids to see you and talk things over with you next Tuesday or Wednesday. Will wire when I know definitely. I am pleased that you are connected with it in the capacity of business manager and as Secretary of the State Society. I know that we shall get along harmoniously and my only hope is that I may be able to maintain the same standard of excellence that you have set for The Journal, and I hope that the profession will continue to look forward to each number that comes out with the same favor and interest that I have for years past. I often wonder if the subscribers of The Journal realize the Herculean service you have rendered in looking after the business interests as well as editorial and at the same time keeping up your medical and surgical practice. I hope you will personally feel the relief in regard to the work that I hope I can give.

Looking forward to seeing you soon, I remain,

Very truly yours,

J. H. Dempster.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Holland City Hospital dedicated and opened its new hospital on January 19th.

Dr. Geo. F. Wilson, Toronto, addressed the staff of Butterworth Hospital, Grand Rapids, on "Fractures" on February 18th.

For official minutes, Society Notices, Plans, Conferences, etc., refer to the Department of Society Activities in succeeding issues of The Journal.

Dr. J. H. Dempster of Detroit, will assume his editorial supervision of The Journal beginning with the March issue. All communications pertaining to original articles, case reports and editorials should be directed to Dr. Dempster at his Detroit office, 641 David Whitney Building. County Society meetings, reports, dues, change of address, subscriptions, advertising and all business details are to be addressed to the State Secretary, 1508 G. R. National Bank Building, Grand Rapids.

Following is the program for Wayne County Medical Society during February:

February 7—General meeting. (1) "Report of a Case of Tularemia," by Dr. E. C. VanSyckle, Detroit. (2) "Treatment of Laryngeal and Advanced Diphtheria," by J. E. Gordon, M. D., Chief resident physician, Herman Kiefer Hospital. Discussion opened by B. Bernabaum, M. D.

February 14—Medical Section. Subject, "Differential Diagnosis Between Hyperthyroidism and Functional Ovarian Insufficiency," by Carlton J. Marinus, M. D., Detroit.

February 21—General Meeting. Subject, "Light and Medicine," by Professor W. T. Bovie, Northwestern University—representing the Council on Physiotherapy of the American Medical Association.

February 28—Surgical Section. Subject, "Early Diagnosis of Cancer Particularly from Gross Characteristics," by William P. Healy, M. D., New York City.

DEATHS

RESOLUTIONS OF RESPECT

The Houghton County Medical Society records with profound sorrow the passing on January 3, 1928, of one of its number, Dr. Otto H. Kohlhaas. We extend to the bereaved family our sincerest sympathy. His passing is a great loss to the medical profession of the county and the community in which he practiced. We knew him as a generous and loyal friend, a careful and conscientious surgeon and feel certain that a host of grateful patients, friends and admirers will greatly miss him.

T. P. Wickliffe, Secretary-Treasurer.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

MASON COUNTY

Notice is hereby given of election of new officers for Mason County Medical Society for the ensuing year. Dr. George Gray, Secretary, and Dr. Ivan Hunt of Scottville, President.

Leo J. Goulet, Secretary.

MIDLAND COUNTY

A meeting of Midland County Medical Society was held on January 19, 1928.

Officers elected for year 1928:

George E. Orth, President; E. J. Dougher, Secretary and Treasurer.

OCEANA COUNTY

At the Annual Meeting of the Oceana County Medical Society, held at Hart, Mich., December 8th, 1927, the following officers were elected:

President, Dr. J. H. Nicholson, Hart, Mich.; Vice President, Dr. A. R. Hayton, Shelby, Mich.; Secretary-Treasurer, Dr. O. G. Wood, Hart, Mich.; Delegate to State Convention, Dr. W. L. Guffer, Shelby, Mich.; Alternate, Dr. J. D. Buskirk, Shelby, Mich.

O. G. Wood, Secretary.

KENT COUNTY

Officers and Committees for 1928 are:

Harrison S. Collisi, President; John N. Wenger, Vice President; John M. Whalen, Secretary-Treasurer; Burton R. Corbus, Councilor, Fifth District; George L. McBride, Defense League Representative.

Delegates to the State Convention—A. V. Wenger, G. H. Southwick, J. D. Brook, H. J. Pyle.

Alternate Delegates to the State Convention—E. W. Schnoor, W. E. Wilson, J. S. Brotherhood, R. H. Spencer.

HOUGHTON COUNTY

The regular monthly meeting of Houghton County Medical Society was held January 10, 1928, at 8:30 p. m., at Miscowaubik Club, Calumet, Michigan. The meeting was postponed from January 3, because of Dr. Otto H. Kohlhaas death the same date.

The program consisted of election of officers for ensuing year; report of cases by Doctors Wickliffe and Gregg, and lunch.

Dr. W. T. King, Ameeek, Mich., was elected President.

Dr. Alfred Labine, Houghton, was elected Vice President.

Dr. T. P. Wickliffe, Lake Linden, was elected Secretary-Treasurer.

Dr. W. T. King was elected Delegate to State Meeting for 1928.

Dr. George McL. Waldie, Houghton, was elected Alternate Delegate for 1928.

Dr. J. R. W. Kirton, Calumet, was elected Censor for three year term.

Dr. Gregg reported a case of traumatic bilateral dislocation of hip joints. This case was

most interesting because of its extreme rarity. Under ether anesthesia, both hips were reduced and patient made perfect recovery.

Dr. Wickliffe reported a case of spontaneous rupture of deep epigastric vein. This case was also of unusual interest because of its rare occurrence. It simulated an intra-abdominal condition so closely that a pre-operative diagnosis of ovarian tumor with twisted pedicle was made. The patient was operated as an emergency, because of pain, shock, and a very painful tumor mass, in right lower quadrant of abdomen. At operation, a right rectus incision made, and under the right rectus muscle a large blood clot was found. This was removed, and bleeding points of deep epigastric vein ligated. Wound closed and patient made uneventful recovery.

Lunch which was provided by the incoming President, Dr. W. T. King, was served.

Meeting adjourned to meet the first Tuesday in February.

T. P. Wickliffe, Secretary-Treasurer.

MECOSTA COUNTY

The December meeting of the Mecosta County Medical Society was held at the new Community Hospital, Big Rapids, December 16, 1927. Dr. Grieve J. Campbell was host.

An excellent dinner was served in the main dining room at 7 p. m., which was presided over by Miss M. Tillotson, assisted by nurses Miss Marsh, Mrs. Walker, Mrs. Boylan and Miss Waldron.

A social hour followed and was held in the spacious Sun Room.

The following officers were elected for 1928:

President, John L. Burkart; First Vice President, Glenn Grieve; Second Vice President, Thos. P. Treynor; Secretary-Treasurer, D. MacIntyre; Legal Advisor, J. B. Campbell; Delegate M. S. M. S., W. T. Dodge; Alternate, Glenn Grieve, all of Big Rapids.

D. MacIntyre, Secretary.

BERRIEN COUNTY

The Berrien County Medical Society met in Benton Harbor at the Hotel Vincent for their annual banquet and election of officers, on the 29 of December, 1927.

Following the dinner a talk was given by the retiring President, Dr. R. B. Howard of Benton Harbor, in which he summed up the results of the past year's work. A few of the things which he covered were the fine series of post-graduate lectures which have been presented to the Society this year. Fourteen outside men have presented papers of excellence and interest in all fields of medicine and surgery, several of which have been published in the State Journal.

The largest meeting was 107. The average attendance better than 50 per cent of qualified members, inclusion of guests and visitors would make the average attendance of the Society around 98 per cent.

The Society also supported the joint Committee

on Health Education, and have a team of 10 men giving the lectures approved by the University Extension Bureau.

A general discussion was then had in which plans were outlined for increasing the membership of the Society. Plans were formed for the new administration to carry out, particularly in regards to inviting the State Society to hold their Annual Meeting for 1929 in the Twin Cities of Benton Harbor and St. Joseph.

A Program Committee consisting of Doctors Witt, Snowden and King were appointed to aid the Secretary in arranging the programs for the coming year.

The report of the Nomination Committee was then read and the election of officers for the coming year was held.

The new President is Dr. J. C. Strayer of Buchanan, Vice President, Dr. F. A. King of Benton Harbor, Secretary and Treasurer, W. C. Ellet (reelected) of Benton Harbor.

The Secretary's report for the past year was read, accepted and placed in the files.

Wishing you all a Happy and Healthful New Year,

W. C. Ellet, Secretary.

GOGEBIC COUNTY

The Gogebic County Medical Society elected the following officers for the year 1928: Dr. Louis Dorpat, President; Dr. W. E. Tew, Vice President; Dr. W. C. Reineking, Secretary-Treasurer; Dr. W. E. Tew, Delegate to the State Convention; Dr. C. E. Stevens, Alternate Delegate; Dr. D. C. Pierpont, Defense League Representative; Doctors C. E. Anderson, T. J. Hambley, M. A. Gertz, W. C. Reineking and Louis Dorpat were chosen as the board of directors. Dr. P. R. Lieberthal, retiring president, gave his annual address in which he submitted a summary of the work of the Society during the past year, showing that it has been successful. Reports were submitted by Dr. A. J. O'Brien as chairman of the program committee; by Dr. C. E. Stevens as chairman of the entertainment committee and by Dr. Louis Dorpat as Secretary-Treasurer. S. W. Patek, Ironwood attorney, delivered an address on the subject "How Should I Interpret My Insurance Policy?" A banquet preceded the annual meeting.

Louis Dorpat, Secretary.

Dr. D. C. Pierpont and Dr. W. Elwood Tew addressed the Gogebic County Medical Society in a regular monthly meeting held at Grand View Hospital, Ironwood, Friday evening, January 6, on the subject, "Gastric Ulcer." Dr. Pierpont treated the subject from the standpoint of the surgeon, while Dr. Tew approached it from the purely medical aspect. A discussion followed by Dr. A. J. O'Brien, Dr. R. I. C. Prout and Dr. J. M. Postle. President Louis Dorpat announced the appointment of the following committees: Program—Dr. P. R. Lieberthal, Chairman; Dr. A. J. O'Brien and Dr. R. I. C. Prout; Entertainment: Dr. W. L. Maccani, Chairman; Dr. Thomas A. Rees and Dr. H. A. Tressel; (Dr. Louis Dorpat and Dr. W. C. Reineking, as the President and Secretary of the Society, are ex-officio members of these two committees); Public Health Education—Dr. M. J. Lieberthal, Chairman; Dr. D. C. Pierpont, Dr. W. E. Tew, Dr. Louis Dorpat and Dr. W. C. Reineking; Legislation: Dr. J. M. Postle, Chairman; Dr. E. H. Madajesky, Dr. W. C. Conley, Dr. T. S. Crosby and Dr. M. M. Han-

son; Visiting Sick Committee—Dr. H. A. Pinkerton, Chairman; Dr. W. J. Pinkerton, Dr. C. E. Stevens, Dr. L. A. Weaver and Dr. M. A. Gertz. The meeting was very well attended.

Dr. John M. Dodd of Ashland, Wis., will address the Society at the next meeting, February 3, on the subject, "The Past, the Present and the Future of the Hospital."

W. C. Reineking, Secretary.

KALAMAZOO COUNTY

The officers of the Kalamazoo Academy of Medicine for 1928 are W. E. Shackleton, President, Kalamazoo, Mich. and R. B. Fast, Secretary, Kalamazoo, Mich.

The forty-fourth annual meeting of the Kalamazoo Academy of Medicine was held Tuesday, December 20, 1927. Clinics at Old Borgess Hospital in the forenoon started an all day session and were followed by luncheon served by the Sisters.

At 1:30 p. m. the business meeting was called to order by the president in the rooms of the Academy. The minutes of the November meeting were approved as printed in the bulletin. Committee reports were received from the standing committees reviewing the work of the past year. Communications were read including an invitation from Dr. Clarence Cook Little to the society asking that an official delegate be appointed to attend the annual meeting of the Race Betterment League to be held in Battle Creek in January, and one from Dr. Kellogg of the Battle Creek Sanitarium asking that the delegate be a guest of the Sanitarium during the convention.

A motion was made by Dr. Bosman supported by Dr. Light that the chair be instructed to appoint a delegate to represent the Academy at this convention. Dr. Barrett was appointed to act as delegate.

Dr. William N. Kenzie whose application for membership was presented at the last meeting and who had been approved by the board of censors was voted into active membership in the society.

The application for membership made by Dr. Russel J. Collier of Vicksburg was read and will be voted on at the next meeting.

Dr. Andrews called the attention of the society to the activities of the optometrists in making routine examination of the eyes of all employes in certain industrial plants and compelling them to buy glasses which in many cases are improperly fitted.

Dr. Light spoke about the efforts made to have the employes of the Upjohn Company examined. Dr. Barrett and Dr. Jackson spoke about the efforts put forth to bring the optometrists before the public schools and the noon day luncheon clubs. Dr. Bennett thought it was time some concerted effort was made by the profession to put on an educational program.

A motion was made by Dr. Light, supported and carried that the chair appoint an investigating committee and if deemed advisable that this committee draft a letter to be sent to the manufacturers informing them of some of the evils of these activities, and giving accurate information on the subject.

The election of officers for the ensuing year resulted as follows:

President—W. E. Shakleton.

1st Vice—A. A. McNabb.

2nd Vice—R. S. Harter.

3rd Vice—W. R. Vaughn.

Secretary—R. B. Fast.
 Treasurer—R. J. Hubbell.
 Librarian—A. E. Pullon.
 Board of Censors—E. P. Wilbur, S. U. Gregg.
 Delegates to the State Society—R. O. Thompson, D. J. Scholten.

Alternate Delegates—F. T. Andrews, L. F. Westcott.

Following the election of officers Dr. Rogers was called to the chair while the president gave his retiring address intitled, "Some Observations."

The scientific program and the annual banquet were carried out as printed in the bulletin, thus closing the best day of the Kalamazoo Academy of Medicine.

R. B. Fast, Secretary.

GRATIOT-ISABELLA-CLARE COUNTY

The January meeting of the Gratiot-Isabella-Clare County Medical Society will be held in the Park House, St. Louis, Thursday, January 26. We will have supper at 6:30; after this will come the report of the Committee on a fee bill.

Dr. M. F. Bronstetter will talk to us on "The Differential Diagnosis of Surgical Conditions of the Abdominal Cavity." We will call on Doctors W. L. Harrigan, T. J. Carney and B. C. Hall to discuss this paper.

For the benefit of those who were not at the December meeting we wish to explain that the County Society dues we raised to \$3.00—this with the State Society Dues of \$10.00—is now due.

The following officers were elected for 1928:

President, W. E. Barstow; Vice President, A. D. Hobbs; Secretary, E. M. Highfield; Delegate, C. F. DuBois; Alternate, M. J. Budge.

The officers with your co-operation hope to make this year's program interesting and profitable.

Wm. Barstow, President.
 E. M. Highfield, Secretary.

ALPENA COUNTY

Program for 1928 Alpena Medical Society:

January 19—President's Address, by Wm. Newton. "Trudeau and Tuberculosis," by John Purdy. Open meeting for ladies and other invited guests, 6 p. m. at Alpena House.

February 15—"Jenner and Smallpox," by D. A. Cameron. Presentation of Clinical Cases by E. L. Foley and S. T. Bell.

March 21—Outside speaker supplied by State Medical Society.

April 18—"Sir Joseph Lister," by F. J. O'Donnell. Presentation of Clinical Cases by John Jackson, C. M. Williams and R. H. Wood.

May 16—Meeting at Rogers City. Paper by Wm. Arscott. Presentation of Clinical Cases by Neil Monroe, C. Carpenter, Basil Larke and Martin Nestor.

June 20—Program Supplied by the Tri County Medical Society, Cadillac.

July 18—Annual Picnic. Perhaps the ladies will do their stuff.

August 15—Meeting with physicians of Northern Michigan at Gaylord. Joint program. Papers to be prepared by E. L. Foley, H. J. Burkholder and R. A. Miller.

September 19—Dialogue, "Some Remedies That Have Served Me Well," by R. H. Wood and F. E.

Michener. Presentation of Clinical Cases by Wm. Newton and D. A. Cameron.

October 17—"Louis Pasteur," by S. T. Bell. Presentation of Clinical Cases by H. J. Burkholder, R. A. Miller and Geo. Lister.

November 21—"Walter Reed and Yellow Fever," C. M. Williams. Presentation of Clinical Cases by Leo. Secrist, F. J. O'Donnell, F. E. Michener and A. J. Schmaller.

December 19—Annual Meeting and Election of Officers. Paper supplied by invited guest.

The year is to feature biography and medical history.

Presentation of Clinical Cases will prove of value according to the time spent in preparation.

Meetings will in the main be held at the Alpena House at 6 p. m.

The Secretary desires to send in all dues on January first. Will you help him? Alpena dues, \$15.00; outside dues, \$11.00.

Mrs. F. J. O'Donnell and Mrs. Wm. Newton are the ones responsible for the organization of the Woman's Auxiliary in Alpena. It will help.

The regular meeting of the Alpena Medical Society was held Thursday, January 19th, at the Temple. The ladies and a few guests enjoyed a fine dinner. The program was featured by an illustrated lecture on Trudeau and Tuberculosis by Dr. John Purdy of Long Rapids. Dr. Purdy described the struggles to convince a skeptical profession of the benefits to be derived from the open air and rest treatment of tuberculosis. He stated that poverty was the great cause of tuberculosis, and that little more improvement could occur in the death rate until the causes of poverty were removed.

The hit of the meeting was entitled "Hot Shots at the Alpena Medical Society," and was broadcast over the blue network at 8 o'clock. These hot shots were given in poetry and were directed point blank at the individual members. Reception over the radio was unusually good, and the members enjoyed to the utmost hearing the others roasted, and so were prepared when their time came. The appreciation of the Alpena Medical Society was expressed to all the radio artists responsible. Dr. Cameron who happened to be in Detroit and heard the broadcasting, copied down the nice things said about him. Here it is:

Remember D. A. Cameron,
 His petting name is Rorie,
 And if we should tell the half we know,
 'Twould make a pretty story.
 In sickness and in sorrow too,
 He's kind and sympathetic,
 But when you're dead, the bill he sends,
 Makes your estate pathetic.

'Twas told that once upon a time,
 A family then on First street,
 Sent for D. A. to quickly cure,
 Their hired girl so sweet.
 And when he found the girl in bed,
 Because of past due wages,
 D. A. began to quick undress
 By most emphatic stages.

Said he, "If that will get the dough,
 I'll go to bed with you dear,
 For many dollars they've owed me
 For many and many a year."

He has more babies in the town,
 Than any other man they say.
 They clubbed together and bought Doc
 A gorgeous Ford coupe.
 They said it was a gift of love
 And should be used as such,
 But Forsyth says on Wessels road,
 Doc used it over much.

He has an iron hat he wears,
 Whene'er he starts to travel,
 Just why he clings to this old hat,
 Is a mystery to unravel.
 And now the many friends of Doc,
 Would treat him as a lover,
 Would put a handle on his hat,
 And fit it with a cover.

(On application to the Secretary any member jealous of the publicity accorded Dr. Cameron, may have the nice things said about them published in this Journal.)

Dr. Wm. Newton, the newly elected President of this Society, expressed his appreciation of the honor conferred upon him, and outlined the program of activities for the coming year.

C. M. Williams, Secretary.

SAINT CLAIR COUNTY

The Annual Meeting of Saint Clair County Medical Society was held at Hotel Harrington, Thursday, December 29, 1927.

Supper was served to fourteen members at 6:15 p. m. and after a period of refreshment the meeting was called to order by President Ryerson at 7:45 p. m. with the following members of the Society present: Doctors Ryerson, Waters, MacKenzie, Derck, Burley, Thomas, Bowden, Wellman, Smith, Heavenrich, Vroman, Howard Brush, Attridge, McColl, Patterson, Clancy, Fraser, LaRue, Kesl, Lane, Treadgold and Callery.

Letter thanking the Society for a floral sent Mrs. A. L. Callery read and placed on file.

Invitation to send a delegate to the Third Race Betterment Conference to be held at Battle Creek, Michigan, January 2 to 6, 1928, read and Dr. Gertrude O'Sullivan was elected to represent the Society at this event.

Minutes of the special meeting held at Port Huron Hospital, December 15, 1927, read and approved.

Annual report of the Secretary-Treasurer showing a balance at the close of the year of \$54.74, read and placed on file.

Upon recommendation of the Councillor of the Seventh District, Dr. Theo. Heavenrich, Dr. W. D. Lane was elected to membership in the Society by transfer from Huron County Medical Society.

A motion was made and supported to hold three social meetings during the year of 1928. This motion was carried.

A discussion relative to the appointment of a Program Committee resulted in an agreement to allow the President of the Society to arrange the scientific programs as in the past.

The following officers were elected to serve during the year of 1928:

President, Dr. Reginald Smith.

Vice President, Dr. Howard Brush.

Secretary-Treasurer, Dr. George M. Kesl.

Delegate to State Convention, Dr. R. C. Fraser.

Alternate to State Convention, Dr. W. P. Derck.

Board of Directors, for the three year term, Dr. George Waters, for the two years term, Dr. D. W. Patterson and for the one year term, Dr. J. A. Attridge.

A motion was made, supported and carried to allow the Board of Directors to arrange for the three social meetings during the coming year.

Dr. W. W. Ryerson thanked the members of the Society and his fellow officers for the support given him during the past year.

Dr. Reginald Smith took the Chair and after discussion of several matters including a discussion of amount of dues now being paid by members and whether a reduction would be possible, the meeting adjourned at 9:10 p. m.

George M. Kesl, Secretary.

IN MEMORIAM

Dr. R. K. Wheeler was born at Interlaken, New York, September 30, 1872 and died at Port Huron, Mich., December 15, 1927. He received his preliminary education in the Public Schools of Interlaken and received the degree of Bachelor of Arts from the University of Rochester in 1895. He received the degree of Doctor of Medicine from Columbia University in 1899. After receiving his degree in medicine Dr. Wheeler entered the Infants Summer Hospital, Rochester, New York, for special training.

He was married in 1906 to Miss Margaret Lydia Brown of Toronto, Canada. He is survived by Mrs. Wheeler and one daughter, Miss Sally Wheeler, the latter a student at Oberlin College.

Dr. Wheeler came to Port Huron in 1905 where he practiced medicine until his death. He was a member of the Alpha Delta Phi fraternity; Port Huron Commandery No. 7, Knights Templar; Huron Chapter No. 27, R. A. M.; Pine Lodge No. 11, F. A. M.; Saint Clair County Medical Society of which he was Secretary from 1912 until 1915 and President in 1917; Staff of Port Huron Hospital; Medical Director of Port Huron Hospital and a member of the Board of Directors; Lecturer in Port Huron Hospital Training School for Nurses and a member of the local Pension Board.

At a special meeting of the Saint Clair County Medical Society, held at Port Huron Hospital, December 15, 1927, many fitting tributes were paid Dr. Wheeler by his associates. A committee was appointed by the President to prepare resolutions of regret and arrangements made for the participation of the Society at the funeral services.

Respectfully,

George M. Kesl, Secretary.

Regular meeting of the Saint Clair County Medical Society was held at the Hotel Harrington, Port Huron, Michigan, Thursday, January 19, 1928. Supper was served to 13 members at 6:15 p. m. After a half hour of social contact the meeting was called to order by President Reginald Smith at 8 p. m., with the following members present: Doctors Smith, Burley, B. E. Brush, Morris, Vroman, McColl, O'Sullivan, Patterson, Merediths, Waters, Thomas, Kesl, Heavenrich, Attridge, Sites, H. O. Brush, Wellman, Derck, Callery, MacKenzie, Windham, Fraser, Ryerson.

The minutes of the meeting of December 29, 1927, were read and approved. Communications were read as follows: a letter from Mrs. Wheeler and her daughter Sally, thanking the Society for

the many evidences of sympathy and the kindness shown during the last illness and death of Dr. R. K. Wheeler; a letter from the Lectureship Foundation Committee of Wayne County Medical Society inviting our Society to attend the Seventh Series of Beaumont Lectures on January 23 and 24, 1928; a letter from Dr. Franklin Martin of Chicago asking when the Society meets during the months of February and March, 1928 and a letter from Miss Carrie Lewis thanking the Society for the plant recently sent her father, Dr. E. E. Lewis, an honorary member of the Society. All letters were placed on file.

Dr. Gertrude O'Sullivan made a very interesting report regarding the transactions and addresses of the Third Race Betterment Conference held at Battle Creek, Michigan, January 2 to 6, 1928. Following the report a discussion of the transmission of acquired characteristics from parent to offspring took place between Dr. B. E. Brush and Dr. O'Sullivan. A motion was made, supported and carried thanking Dr. O'Sullivan for representing the Society at Battle Creek and for her report.

Dr. Theo. Heavenrich made a short report regarding the recent meeting of the Council. He laid particular stress upon the report of Dr. Frank Tibbals of the Medico-legal Committee and stated that this Committee recommended local Societies see to it that those members using the X-ray, and giving treatment with ultra-violet ray, diathermy, etc., be fully qualified. Dr. Heavenrich also mentioned the special activities of the Wayne County Society, probable reduction in state dues and Chiropractors Act to come up at the next session of the legislature.

Dr. J. A. Attridge reported to the Society that Dr. E. E. Lewis would be glad to receive an honorary membership in the Society and upon motion duly seconded and carried, Dr. Lewis was so elected.

Dr. H. O. Brush read a very well prepared paper on the "Toxemias of Pregnancy." The speaker stressed the following points: ancient knowledge of the condition, definite recognition of eclampsia at the beginning of the nineteenth century, etiology and pathology so far as our present knowledge extends, the controversy whether the hepatic change precedes and causes the renal pathology or visa versa, symptomatology preceding the eclamptic state, the reliability of the sign of toxemia as given by blood pressure estimations, the theories advanced by certain authorities that the causative factor lay in colon infection, teeth infection and other foci of chronic suppurative infection, the importance and reliability of urinary findings, particularly the 24-hour quantity and presence of albumin and casts.

Dr. Brush believes that the true cause is a disturbance of metabolism and that the treatment should be prophylactic; that is, careful pre-natal care and if the eclamptic state does ensue the conservative or moderate plan of treatment offers best results. In concluding his paper, the speaker outlined several methods of treatment for eclampsia and stated that in his opinion the conservative treatment should always be given a trial before taking up the radical. Also that intelligent pre-natal care will detect early cases of toxemia and in many cases prevent the development of eclampsia.

Dr. D. J. McColl opened the discussion by complimenting Dr. Brush on the thoroughness and excellence of his paper and stated that in his experience careful pre-natal care and heeding of certain danger signs such as rapid increase in weight,

oedema, albuminuria and increase in blood pressure would do much to prevent the onset of eclampsia. Also that restricted diet, careful watching of the 24-hour quantity and restriction of exercise were important.

Dr. A. L. Callery also complimented the speaker and divided the toxemias of pregnancy into three groups, the hyperemesis, the non-convulsive and convulsive types. He spoke briefly of the probable etiology and reported the decrease of eclampsia and toxemia of pregnancy in Germany during the last war. This he thought was due to lack of protein and fatty foods and bore out the theory that the liver might be the viscera involved in the toxemias of pregnancy. Dr. Callery also stressed the importance of a high diastolic pressure, and expressed the view that radical treatment was attended by a high mortality to both mother and child because of the lowered resistance of mother. He outlined the conservative method involving the use of Morphine, Chloral and Magnesium Sulphate, the latter intravenously.

Dr. J. E. Wellman asked Dr. R. A. Windham to tell the Society about his treatment of eclampsia and the latter arose to say that Dr. Callery had already described the treatment Dr. Wellman referred to.

Dr. E. C. Sites told of his work in the study of the etiology and pathology of the toxemias of pregnancy at the Indiana University Hospital. He said that he believed there were several groups of factors acting to cause the condition and each group had independent factors back of it. "Liver dysfunction," said Dr. Sites, "rather than any primary kidney pathology, may be the cause." An increase in weight is a bad sign and demands a high carbohydrate diet according to Dr. Sites. He emphasized the fact that in his experience eye damage was permanent following severe toxemia and also that eye grounds furnished reliable information of the development of the pre-eclamptic state.

Dr. M. E. Vroman discussed the eye ground findings with reference to the condition and said that he had observed many cases of toxemia with damage to the optic nerve.

Dr. B. E. Brush in his discussion gave his views of the cause as that of a constitutional weakness which broke down on the added strain of extra elimination. He emphasized the factor of heredity. Also that permanent cardio-vascular-renal damage following a severe toxemia was more or less permanent.

Dr. Gertrude O'Sullivan stated that careful pre-natal care was important and that she believed that over eating and age were two causes, that in her experience women in the later decades of life were more liable to develop eclampsia than younger patients.

Dr. W. P. Derck reported a case of peculiar tonic muscular contractions associated with pregnancy in which he had advised early interference.

Dr. A. J. MacKenzie spoke of the widespread etiology of the condition and stated that the true cause was not known. He thought that pre-natal care helped very much to prevent toxemia. As to treatment of the eclamptic state itself he thought conservative rather than radical treatment was the better.

Dr. J. H. Burley arose to compliment the paper of Dr. H. O. Brush and to state several of his own ideas as regarded the factors likely to bring on a toxemia.

Dr. D. W. Patterson discussed anaesthesia used

in such conditions and stated that oxygen nitrous oxide was very satisfactory.

Dr. George Waters reported a family many of the members of which suffered eclampsia and stated that he believed heredity a potent factor in etiology.

Dr. C. F. Thomas arose to compliment Dr. Brush on his paper and stated that he had never attended any medical meeting where he derived so much good from the discussion. He suggested that more of the members of the Society be called upon for papers.

Dr. D. J. McColl stated that in his experience a previous history of at least some toxemia or convulsions could be obtained in many of his cases which came under treatment in succeeding pregnancies and thought that this brought up the problem whether it was advisable to advise against pregnancy and in favor of sterilization in these cases.

Dr. H. O. Brush closed his paper in the usual manner and stated a very interesting fact, namely: that eclampsia did occur in dogs and that the lowering of the alkaline reserve seemed to be an etiologic factor in this experimental work.

Dr. Reginald Smith, President of the Society, made a few closing remarks stating that in the future the Brush Clinic and Dr. M. E. Vroman would present papers before the Society.

The meeting adjourned at 10:15 p. m.

George M. Kesl, Secretary.

OAKLAND COUNTY

Dr. Frederick Baker was elected President of the Oakland County Medical Society at the annual meeting, December 22, at the Board of Commerce. Other officers elected were:

Vice President, Dr. Frank A. Mercer; Secretary, Dr. C. A. Neafie; Treasurer, Dr. I. C. Prevette; Board of Directors, Dr. R. Y. Ferguson, Dr. H. A. Sibley and Dr. B. M. Mitchell. Delegates named to the Michigan State Medical Society meeting are Dr. N. B. Colvin and Dr. H. A. Sibley, with Dr. Leon Cobb and Dr. Robert H. Baker as alternates.

The Oakland County Medical Society held a meeting and banquet at 6:30 o'clock Thursday evening, January 19 at the Board of Commerce. Dr. F. B. Gerls was the principal speaker, discussing gastro-intestinal disturbances in infants having their origin in the ear. Doctors B. T. Larson, Campbell Harvey and H. A. Shelby carried on the discussion.

A special invitation to attend the banquet was issued by the Society to its newly elected members, including two women doctors, Helen Cannon and Goldie B. Corneliussen, who recently opened offices here, and Dr. E. A. Christie, Dr. Dwight M. Ernest and Dr. Harold A. St. John, all of Pontiac; Dr. Carl Dahlgren, Keego Harbor; Dr. R. S. Grimmett, Rochester, and Dr. T. W. K. Hume, Auburn Heights.

Announcement of the meeting and dinner were contained in the first issue of the Society's new bulletin, prepared by Dr. Frederick A. Baker, president, and Dr. C. A. Neafie, secretary of the Society.

Four new members were elected to the Society at this meeting. They are Dr. Ernest W. Bauer, of Hazel Park; Dr. Fred Townsend Reid, Clawson; Dr. E. Kyle Simpson, Pontiac, and Dr. Harold Roehm, Birmingham.

Despite the weather, more than 40 members of the Society attended the meeting and banquet. February 16 was announced as the date of the next meeting, at which Judge Glenn C. Gillespie will be the speaker.

Rr. Frank B. Gerls, in a paper read before the Society, stressed the fact that many cases of gastro-intestinal disturbance in infants particularly during the months from September to June when tonsillitis and head colds are more prevalent, are often due to infections of the ear. He emphasized the necessity of a careful examination of both ears in order to exclude the ears as the cause of intestinal disorders.

Dead Doctor:

At this time of the year it is the custom to make resolutions. As your President of the Oakland County Medical Society I resolve that I shall do my utmost to make this the best year in our history. In order to do this, of course, I must have your hearty support. This is your Society, your organization, and perhaps the most important organization to which you belong. It is indeed a credit and an honor to belong to such an organization.

There are many things to be accomplished this year. I have in mind some real constructive, educational and other work of the utmost interest to the profession. In order to accomplish this I will repeat that I must have your co-operation. Will you help me in this? Will you highly resolve that you will set aside the year of 1928 as one that you will do your best to attend the meetings and give your ideas; at least attend the meetings.

I know that I speak for the other officers that you have elected and I feel that whatever enthusiasm I have is supported by them.

I also wish to take this opportunity of expressing my hope that you will have a very Happy and Prosperous New Year.

Your fraternally,
Frederick A. Baker, President.

A cordial greeting is extended to our newly elected members: Doctors E. A. Christies, Helen Cannon, Goldie B. Corneliussen, Dwight M. Ernest, Harold A. St. John of Pontiac; Carl Dahlgren, Keego Harbor; R. S. Grimmett, Rochester, and T. W. K. Hume, Auburn Heights.

A meeting of the Society was held at 6:30 p. m., Thursday evening, January 19th, at the Board of Commerce, Pontiac.

Dr. F. B. Gerls presented a paper on "Gastro-intestinal disturbances of otitic origin in infants."

Discussed by Doctors B. T. Larson, Campbell Harvey and H. A. Sibley.

Dinner a la carte was served.

Applications for membership are:

Ernest W. Bauer, University of Michigan, 1923. Address Hazel Park.

Fred Townsend Reid, University of Michigan, 1923. Address Clawson, Michigan.

E. Kyle Simpson, University of Western Ontario, 1912. Address 816 Pontiac Bank Bldg., Pontiac.

For the February meeting we have arranged to have Judge Glenn C. Gillespie relate some of his hunting experiences in northern Michigan, illustrated with moving pictures. Date of meeting will be announced later.

C. A. Neafie, M. D., Secretary.

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THE TREATMENT OF DIABETIC ACIDOSIS AND COMA

LEONARD F. C. WENDT, M. D., F. A. C. P.

DON W. McLEAN, B. S., M. D.

From the Diabetic Service of The Grace Hospital

DETROIT, MICHIGAN

The most logical and effective treatment of diabetic acidosis and coma is its prevention by the administration of a properly balanced diet. It is the diabetic who is overfed that goes into acidosis and coma. The patient on insulin is always fed beyond his tolerance and any neglect in its administration is the same as overfeeding. Any condition causing increased metabolism is also equivalent to overfeeding.

The difference between diabetic acidosis and coma is one of degree only; in the first case we are treating acidosis in a conscious patient, and in the second in an unconscious patient. In no medical condition do we find our patients in greater danger. An ideal treatment would fall little short of constant personal supervision. Since this is seldom possible, we should at

least formulate some rational rules for treatment, incorporating to the best of our ability, a basis for sound judgment in the more common conditions that arise in diabetic acidosis. We must also give them sufficient specificity to avoid misinterpretation by one ordinarily qualified to administer such treatment.

CONSERVATION OF PATIENT'S ENERGY

Our first problem is the conservation of the patient's energy, which can be best accomplished by confining him strictly to bed. This will lower the metabolism and inhibit the formation of ketone bodies. It sometimes happens that the patient is restless or even mildly maniacal. Such patients are not easily handled, so it is imperative that our first order should state specifical-

ly, 1, *Confine strictly to bed.* Any form of mechanical restraint that might be employed for this purpose will serve only as an aggravation and a very unjust imposition on a sick patient. There can, of course, be no justification for the use of sedatives in such a condition. The problem of rest in these cases is primarily a problem of nursing.

AVOID OPIATES AND OTHER SEDATIVES

Another problem which we must consider early in our treatment is the presence of complicating diseases. The doctor is frequently called to treat a pleurisy, a gall stone colic, or a renal colic, in a patient who is also a severe diabetic. The patient does not complain of the diabetes, and frequently does not mention it, but will invariably demand relief from the pain. So it frequently happens that a diabetic deeply in acidosis will be given a $\frac{1}{4}$ or even a $\frac{1}{2}$ grain of morphin for pain, only to be thrown into profound coma. We must consider at this point that the diabetic in acidosis is subject to attacks of pain which may simulate almost any acute condition; but for which we can usually find no definite organic pathology. It is possible that these pains may be sensory reactions of degeneration, or reactions to an abnormal chemical stimulation of the nerve cells themselves. The blood count will usually give us but slight assistance, because there is such a blood concentration in acidosis that the white count may reach 20,000 or more in the absence of any demonstrable infection. I do not mean by this that there are not surgical indications in some of these cases. I cannot think of no special reason why a diabetic in acidosis might not also have an acute appendix, or a ruptured ulcer, and operation in such cases may offer the only hope of recovery. But these conditions are not common, while pain is a frequent complaint in diabetic acidosis; we should be very careful in our diagnosis. In my opinion morphin should seldom if ever be given, and most certainly never without the consultation and advice of a competent surgeon who has had special experience in such cases.

So it is well in handling these cases that our second order should read, 2. *Do not use mechanical restraint, sedatives or opiates.*

IMPORTANCE OF WARMTH AND OF FLUIDS

Our next problem is the preservation of body heat. This is best accomplished by covering the patient well with warm

blankets, and may be advantageously augmented by a liberal supply of warm water bottles placed outside the inner blanket. In acidosis the skin is abnormally sensitive to heat, so we must insist that the water bottles be only warm and not hot, and that they be placed outside the inner blanket. So our third order will read, 3. *Apply external heat with warm blankets and warm bags outside the inner blanket. Do not let bags come in contact with patient.* Such an order will usually obviate the necessity of treating burns, which in the diabetic, and particularly in the arteriosclerotic diabetic, frequently become gangrenous and heal very slowly.

Our patient in acidosis is always dehydrated, and the application of external heat will serve for the further dessication of his tissues. Obviously, our next duty is to supply fluids in a suitable form so that we may dilute his acids and facilitate their elimination. If the patient is conscious and can drink and retain 8 oz. of fluid every hour, the problem of administering the fluid is solved. The fluids should be hot, but the patient will not drink such a quantity of hot fluids. The patient prefers cold fluids, but the ingestion of such a quantity of cold fluid would not only be a needless sacrifice of body heat but would invariably lead to vomiting. Therefore, let us alternate hot drinks with cold. The fluids best suited to our use are tea and coffee for their heat and caffeine content; clear meat broth for its peculiar flavor and salt content; and orange juice and oatmeal water for their levulose content. The tea, coffee, and broth are given hot, the oatmeal water may be either hot or cold; while the orange juice and water are given cold. The kind and quantity of fluid to be given in each case will depend upon the age and weight of the patient, the severity of his acidosis, and the condition of his cardio-renal system. For the conscious patient who has not vomited and can tolerate fluids well by mouth we have no worry. So for our fourth order let us say, 4. *Give 8 oz. of tea, coffee, water or clear meat broth q.1.h. for 6 hours and then q.2.h., alternating hot drinks with cold until the patient is sugar free.* When he is sugar free we will substitute orange juice or oatmeal water for some of the above fluids.

But when our patient is comatose or semicomatose and has vomited, as is usually the case, we have quite another problem. The passing of a stomach tube may be a life saving measure. In Joslin's¹ clinic

lavage is a routine procedure in all cases with a plasma CO₂ of 20 vol. per cent or less. After lavage nothing should be given by mouth so long as the patient is nauseated or semicomatose.

Here we must depend upon hypodermoclysis and we can easily give 1,000 c.c. of normal saline with one per cent glucose every 4 to 6 hours. The lower bowel should be emptied with an enema and can later be used for the administration of glucose solution by retention enema or Murphy drip. Glucose by bowel is best given as a five per cent solution, which, under certain conditions of a complicating fixed acidosis, may be incorporated with a three per cent sodium bicarbonate solution. An investigation of the blood and urine chemistry should be started at the earliest possible moment.

BLOOD SUGAR READING AND INSULIN

The above orders may be satisfactorily carried out on urine examinations alone, but before we go much further we should know the level of the blood sugar, N.P.N., and CO₂ of the alveolar air and plasma. These findings will influence our subsequent course of treatment. The blood sugar reading will furnish a reliable guide for the administration of insulin. A high N.P.N. will warn us of a fixed acidosis and a possible impending uremia, and will influence to some extent our dosage of insulin. Other conditions being equal the diabetic with a high N.P.N. (say one of 60 mg. per 100 c.c. or higher) should receive smaller doses of insulin than the one whose kidney function is more nearly normal. Large doses of insulin apparently predispose to nitrogen retention even in the normal kidney. Many cases have recently been reported in the literature where N.P.N. has risen to from 100 to 200 mg. per 100 c.c. with large doses of insulin, and fallen to normal as the insulin was reduced. These experiences have been duplicated in our own clinic and subsequent kidney function tests have almost invariably given normal results. The CO₂ of the plasma and alveolar air furnish an accurate index of the efficacy of our treatment and the prognosis of the case. So for our fifth order we will write, 5. *Blood sugar, N.P.N. and CO₂ of the plasma and alveolar air.*

INSULIN IN DIABETIC COMA ONLY

Our first dose of insulin will probably be given before we have had the blood sugar determination, but it should never be given until we are reasonably sure of

the diagnosis. Patients with skull fracture may show a glycosuria; patients with renal glycosuria may also suffer from epilepsy; and, on the other hand, patients who suffer a stroke of apoplexy may be also true diabetics, while uremia may be associated with either a renal or a true diabetic glycosuria.

Diabetic patients are subject to many forms of coma, but insulin is indicated in the treatment of only one of them. Having decided that our case is one of true diabetic coma we will give insulin. The amount to be given at the first dose will depend upon the physical condition of the patient, and the amount of sugar in the urine. If the patient is in extremis a dose of 20 or even 30 units may be administered, a part of which may be given intravenously.

Foshay² has recently shown that in young diabetics, and in old diabetics with acute infections or severe acidosis, hyperglycemia produces a dehydration of the blood and of the fixed tissues, thus causing, in addition to the ketosis, a non-volatile acidosis with a consequent increase in erythrocyte volume by a process of water transference. When insulin is administered there is a reversal of this reaction. There is an increase in blood volume and a flooding of the fixed tissues. The water transfer between erythrocyte and plasma is apparently controlled by the acid-base balance of the blood. This contention has been corroborated by Andrews³ in his work on water metabolism. As we raise the alkali reserve there is a dilution of the blood, decreased corpuscular volume, generalized edema of the fixed tissues, and finally symptoms of alkalosis. That such a condition may be produced by the injudicious use of alkalis is obvious. That an identical state may be produced by large doses of insulin has been notably demonstrated by Joslin¹ who has recently reported a case of diabetic coma that died in alkalosis on the fifth day without having received any alkali. It is possible that some of our insulin reactions in the presence of normal blood sugars may be due to an unrecognized alkalosis. The more recent observers now contend that it is not especially the deficiency in the amount of the blood sugar that gives the reaction known as hypoglycemia, but that this reaction depends more upon the rate at which the sugar is reduced. This may be only another way of saying that it depends upon an insulin alkalimia. This is a very fruitful field for investigation. In the meantime it would be well for us to

remember that the alkali reserve of the blood should be adjusted cautiously, that it is not necessary to administer alkalies to produce alkalosis, and that insulin is much safer when given in small, frequently repeated doses.

INSULIN IN SMALL DOSAGE

It is very difficult to determine just what effect we are going to obtain from a given dose of insulin. According to Macleod the glucose equivalent per unit of insulin will depend chiefly upon two things⁴. 1. The height of the blood sugar. 2. The size of the dose of insulin. The higher the blood sugar, or the greater the amount of carbohydrate in the diet the greater will be the effect of each unit of insulin. It is thought that the glucose synthesized from protein is not so readily reduced through the insulin action as the glucose that is taken in the form of carbohydrate. If this is true we would expect less response from the insulin when there is a high protein intake, or when the patient is forming sugar from his own tissues. Ordinarily the smaller the dose of insulin the greater the effect from each unit, thus we see that small doses are comparatively more efficient than large doses of insulin. These conclusions also indicate that the most efficient treatment of acidosis, so far as the use of insulin is concerned, would be the administration of small doses of insulin together with enough carbohydrate to ensure sufficient glucose for the optimal insulin action.

Andrews⁵ in his experiments on dogs, has shown that the effect of insulin will depend upon the degree of dehydration, the integrity of the portal circulation, and the route of administration of the drug. In the presence of dehydration the insulin effect is intensified and prolonged. Conversely, when there is superhydration the depressing action of insulin upon the blood sugar is almost lost.

If our primary consideration was simply the lowering of the blood sugar, we should make an effort to induce rather than combat dehydration; but since our aim in treatment is the mobilization and utilization of blood sugar to build up new protoplasm, we will give fluids copiously.

INITIAL EFFECT OF INSULIN

The first effect of insulin is an increase in the blood sugar, possibly due to a stimulation of the adrenals with a consequent mobilization of sugar from the liver and muscles. That this preliminary rise in the

blood sugar is dependent upon the integrity of the portal circulation was proven by Andrews⁵ when he showed that there was no preliminary rise in the blood sugar after the administration of insulin to patients with cirrhosis of the liver; neither would adrenalin cause a rise in the blood sugar in these cases. He concludes that dehydration interferes with sugar mobilization by impeding the portal circulation.

In 1925 Corbitt⁶ concluded from animal experiments that "The effect of insulin injections increases proportionally to the distance from the circulatory system at which the injections are made. Hence, intravenous injections are the least effective, intramuscular and subcutaneous injections are considerably more effective, and intradermal injections have the greatest effect of all."

Meltzer and Klein showed a somewhat similar effect for adrenalin in 1914¹⁰.

Mueller and Corbitt⁷ think that these results signify that the effect of adrenalin lies in its ability to exert a specific stimulation on the sympathetic nervous system, and that the effect of insulin lies in its ability to exert a specific stimulation on the parasympathetic or autonomic nervous system. Atropin, which blocks off the post ganglionic end organs of the autonomic system, inhibits the effect of insulin. Both adrenalin and pituitrin inhibit the effect of insulin. If we would profit by this experimental data, we should refrain from giving our diabetics any drugs that will either stimulate the sympathetic or impose a block in the autonomic nervous system. Therefore, we will not administer adrenalin, pituitrin, or atropin, except in cases of dire necessity.

In extreme cases Joslin¹ believes in starting the patient off with a small dose of insulin intravenously, but cautions that in all cases a similar or larger dose should be given subcutaneously. The intradermal administration of insulin requires a very concentrated preparation of the drug, and at best is quite painful. For our use we will depend upon the subcutaneous route. We will regulate our dosage by the height of the blood sugar, the CO₂ of the plasma, the glycosuria, and the ketonuria. We will administer glucose, not with the thought of protecting our insulin, for that would signify that we did not know what dose of insulin to give, but we will give the glucose to spare the glycogen reserves in the liver and muscles. Probably the best method of administering the glucose is in the form

of a five per cent solution per rectum. Joslin⁸ claims that by this method the blood sugar does not rise so high and the ketone bodies disappear as rapidly as when the glucose is given by mouth.

Janney and Shapiro⁹ contend that insulin has two functions, first glycolytic, and second protogenic. In the presence of the insulin stimulation the glucose is broken up into intermediate carbohydrate metabolites, which unite with the ketone bodies to form protoplasm. They hold that acidosis is a form of protein starvation in which the body cells are not able to regenerate, that the coma does not necessarily depend upon the extent of the acidosis, but rather that the acidosis and the coma are both dependent upon cellular degeneration.

The administration of glucose and insulin will again establish the process of cellular regeneration, and our prognosis will depend upon the extent of cellular degeneration and dissolution in each case.

USE OF ALKALIES LIMITED

As to the use of alkalies, I can see only on one indication, and that is not essentially diabetic. When the acetone and the diacetic acid have disappeared from the urine and the patient is still in acidosis as determined by a low CO₂ of the plasma, then it is time to administer soda. It is best given in the form of a three per cent solution intravenously, or preferably with glucose per rectum.

I think the most distressing complication in our cases of acidosis has been the oliguria and anuria. The most effective treatment for this condition is the forcing of fluids with glucose and insulin to increase the blood volume and facilitate the renal circulation. When stimulants are required it is well to use caffeine sodium benzoate grain 5 to 7 as indicated. The routine use of digitalis may prove useful when the pulse is over 100 per min. Small amounts of whisky may be given for its caloric value. We will not use drugs that will in anyway interfere with the effect of insulin. It would be interesting to go over our charts and see how many of our fatal cases had received adrenalin.

The trend of treatment is constantly to use smaller and more frequent doses of insulin, with enough glucose to spare our reserve glycogen and ensure a maximal rate of tissue regeneration. When the patient has regained consciousness we can give a liquid diet in the form of milk, orange juice, and egg nogs. The diet is carefully

calculated, the urine is tested every four hours, and an appropriate dose of insulin is given when sugar is found. The amount of insulin necessary to keep the patient sugar free for 24 hours is then calculated. This dose may then be divided and given before meals. It is especially important that the patient eat all the food on the tray, when the insulin is given before meals. Any food that is left must be returned to the diet kitchen and reserved in some form suitable to the patient; otherwise our next case of coma will be one called hypoglycemia, in which the administration of insulin is not indicated. A 24-hour specimen of the urine should be examined daily until the patient has completely recovered from the acidosis, and is sugar free on a well balanced diet.

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THE MEDICAL SCIENCE DEPARTMENT OF THE DETROIT PUBLIC LIBRARY

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DETROIT, MICHIGAN

I have thought a brief account of the history and administration of the *Library of the Wayne County Medical Society* might prove interesting to the readers of the Journal and place a matter of historic interest in a permanent abode of record.

Mention is made in the Constitution of the Wayne County Medical Society August 21, 1876, of the purchase and care of books. The Detroit Medical and Library Association was organized September 6, 1876. In 1902 it united with the Wayne County Medical Society, turning over its collection of books to the Public Library Commission of the City of Detroit. In 1910 the Commission relinquished the Library and it was housed in the building of the Society,

65 E. High street, now the Vernor Highway, East.

July 1, 1923, at the request of the Medical Society the Library Commission again took over its library and instituted the *Medical Science Department of the Public Library*. This is now housed on the third floor of the new unit of the Detroit College of Medicine and Surgery, which college since 1917 has been under the control of the Board of Education of the City of Detroit and forms an integral part of the educational system of the city.

The Public Library Commission has control of the library, purchases the books and periodicals, pays all salaries and other incidental expenses. An Advisory Committee, called the Library Committee of the Wayne County Medical Society, has been appointed by the Medical Society and its function is to advise regarding the purchase of books and any other routine of this department. The Detroit College of Medicine and Surgery through the Board of Education provides light, heat, and janitor service but in no way controls or administers the library.

Throughout these years the cost of enlarging and maintaining a library commensurate with its importance to our rapidly growing city became a very serious problem to the Trustees and the Library Committee of the Medical Society. Now that it was safely housed and under the control of the Public Library Commission, provided for in the annual budget, thought has been given to its enlargement and perpetuation. At the suggestion of the late Dr. Herbert M. Rich, for many years Chairman of the Library Committee of the Wayne County Medical Society, the importance of a well equipped library to the profession, and indirectly to the public, was placed before the Mayor and the Common Council by the insertion in the last annual budget of the Library Commission a separate item of \$12,500, the same to form a fourth annual appropriation of a total sum of \$50,000, which this Committee acting with the Library Commission deemed to be the minimum sum necessary to equip the Library. Fortunately His Honor, the Mayor John W. Smith, and the Common Council were convinced by the views presented them and allowed the item in full. It is earnestly hoped, now that the start has been made, that favorable action will again be taken during the coming years. The Library Commission has inserted the same item in its budget for 1928-29.

At the time of the grant of the first \$12,500 it was agreed that the Wayne County Medical Society should, to show its earnestness, appropriate through its membership one-tenth of any amount allowed by the Mayor and the Common Council and this sum of \$1,250 has been received by the Library Commission.

In addition the Library Commission is to receive through the generosity of Mrs. Clarence A. Lightner, daughter of the late Dr. Theo. A. McGraw, and Mrs. Theo. A. McGraw, Jr., daughter of the late Dr. Howard W. Longyear and wife of the younger McGraw, the income from a sum of \$20,000 deposited in trust with the Detroit Trust company, given to perpetuate their memory in this dignified and practical manner.

With this these donors have given to the Library Commission the sum of \$1,000 to bring the collection up to date.

It is not necessary to go into the life history and work of Dr. Theo. A. McGraw and his only son Dr. Theo. A. McGraw, Jr., except possibly to call attention to the fact that during the latter years of his life the younger McGraw devoted his work to the Internal Secretions and that, as the field of surgery is so broad and it is desired by the donors that the books and periodicals purchased in memory of both shall be housed in the same room, it has been requested that the field of Surgery be limited to the Surgery of the Thyroid Gland because of its close relationship to the glands of Internal Secretion.

In a Memorandum of agreement made the 20th day of December, 1927, between the Donors and the Detroit Trust Company, the following provisions among others are made:

"The net income arising from the securities set forth in the *schedule of property* and from the investments and reinvestments of all moneys and other securities which shall at any time be in the hands of the *trustee* hereunder shall be paid, in quarterly or semi-annual installments, as shall appear most convenient, to the *Detroit Library Commission*, to be used by it exclusively for the purchase of new books and periodicals for that portion of the Detroit Public Library which was obtained from the Wayne County Medical Society, and the *Donors* hereby direct that particular care shall be exercised by said Detroit Library Commission to secure all worth while literature in existence relative to internal secretions and surgical treatment of the thyroid gland. The *Detroit Trust com-*

pany shall not be responsible for the application which the said Library Commission shall make of the income delivered to it and said Library Commission shall treat the foregoing statement as to the character of the books and periodicals to be purchased as a recommendation rather than a restriction, except that only medical or surgical books and periodicals shall be purchased with the income provided thereunder.

Should it ever hereafter occur that the books obtained by the Detroit Library Commission from the Wayne County Medical Society shall be returned to said Society, and the custody and control thereof be again vested in the Trustees of the Wayne County Medical Society rather than in the Detroit Library Commission, the *Trustee* hereunder, upon being informed thereof, shall pay to the Trustees of the *Wayne County Medical Society* the net income which it is above directed to pay to the Detroit Library Commission, and the Trustees of the Wayne County Medical Society shall use the same for the purpose above mentioned."

At a regular meeting December 20, 1927, the Library Commission formally accepted with pleasure the gift offered through Mr. Clarence A. Lightner, one of its distinguished members.

Thus through the work of the Library Committee of the Wayne County Medical Society and the Detroit Library Commission, the generosity of the City through the Mayor and the Common Council, the generosity of Mrs. Clarence A. Lightner and Mrs. Theo. A. McGraw, Jr., and the Board of Education of the City of Detroit excellent care will be taken of the library, already comprising 23,604 volumes of books and periodicals.

THE HUMAN CONSTITUTION*

GEORGE DRAPER, M. D.

NEW YORK CITY

From the Department of Columbia University; College of Physicians and Surgeons and the Presbyterian Hospital. Being the seventh series of lectures delivered before the Wayne County Medical Society, Detroit, under the Beaumont Foundation.

Dr. Draper was introduced by Dr. James E. Davis, chairman of the lectureship

foundation, who briefly sketched the history of the Beaumont lectureship. He referred to the line of thought of the present lecturer, quoting a reference to him made by Sir Arthur Keith, who referred to him as one who sought to link up the machinery of growth, the machinery which gives the body its shape, texture and constitution with its liability to disorder and disease.

The Human Constitution, Its Significance in Medicine and How it May be Studied, was the title of the first lecture. The subjects of the three lectures were vast in their extent because they dealt with human beings, no two of whom were alike not even for identical twins. The anthropologist claimed that identical twins were alike even bone for bone but the painter of identical twins showed two different individuals. This could fairly be said to represent the science and the art of medicine. Medicine up to the present was mechanistic. It dealt with disease almost to the neglect of study of the human organism. It should, however, be remembered that we cannot have disease without having a man or woman or child to have the disease. We knew all about the morphology of the bacteria of typhoid or meningitis but we did not know all about the person having the disease. The old-time doctor knew practically little about the bacterial cause of disease but he knew the peculiarity of his patient. Dr. Draper claimed that there was nothing new in the method of study he advocated, as it was originated by Hippocrates. What he aimed at was to bring to it greater exactness. The term human constitution was defined as embracing the aggregate of hereditary characters, influenced more or less by environment which determined a person's reaction to his environment. The patient who presented himself to the physician must be looked upon as a result of the combined influence of both heredity and environment. The term phenotype was used to designate such individual. He might therefore differ to a certain extent from his natural inheritance or "genotype" pattern.

GENETIC STUDIES IMPORTANT

The speaker dwelt upon the importance

* The Beaumont Foundation was established about eight years ago by contributions of a number of members of the Wayne County Medical Society. The annual income from the fund has been sufficient to meet the remuneration of the lecturer as well as expenses in connection with the publication of each series. The annual event is more than local interest commemorating as it does the work of one who has made this State famous in the annals of physiology. These lectures are announced each year in this

Journal, which means that the members of the Michigan State Medical Society are welcome to attend. A very much condensed report of Dr. Draper's lectures is presented here. No attempt has been made to report verbatim but an endeavor has been made to give the substance of the lectures. Dr. Draper is not responsible for any reportorial shortcomings. The complete volume fully illustrated will appear in due time from the press of the Williams and Wilkins Company, Baltimore. It will be announced to our readers as soon as it is published.—Editor.

of genetic studies for the medical clinic. This had been stressed by Barker of Johns Hopkins who pointed out the possibility of obtaining data to elucidate genotypic patterns. A slide was presented showing such external characteristics as ptosis of the eyelids, subcutaneous fibromata, redundant bulbar conjunctiva. Other members of the same family showed the same characteristics which went to indicate hereditary or genotypic tendency to excessive development of mesodermal tissue. We had a hint from this as to the vital capacity of other tissues. The patient presenting these external marks had also a mild diabetes for which relief was sought.

The speaker next cited instances of the effects of environment, illustrating by the effect of castration on long bone growth. An instance was given of an individual who had grown six inches within a few months following a destructive orchitis due to mumps. Again a variety of inadequate constitutional states was found to follow malnutrition in early youth. These affected the physiological phase. The psychic panel was of equal importance but as yet there was great difficulty in dealing with this aspect of the study of construction because of the absence of adequate tests of psychic reactions. There was every reason to believe that the endocrine glands were directly influenced by emotional stimuli.

ENDOCRINES AND GROWTH

It is common knowledge that the gonads, pituitary and thyroid glands were definitely involved in the phenomoma of growth and development. The adrenal glands have a definite relation to the mechanism of self-preservation. Emotions concerned with self-preservation or perpetuation could produce marked physiological change simply by influence on these endocrine glands. The appearance of typical Graves' disease has been seen to follow fright. A fear established in childhood may continue in the subconscious and so affect the thyroid influence on growth process. Fears may affect various individuals in different ways as the same individuals would react in different ways to chemical and bacterial agents.

A complete study of any individual or phenotype should include not only observations of his special qualities as expressed in the four phases of personality; namely, his genetic and environmental history should be gone into as well. The constitution changed with the different stages of

growth and development. These stages or epochs were described by Dr. Draper as that which precedes puberty; the years of puberty; the longer stretch of active adult life; the climacteric; and lastly the period of decline. The continual change in the phenotype depended upon the continual accumulation of paratypic influences. The doctor stated that so far, his studies had been confined chiefly to the period from puberty to the menopause.

BASIC TYPES

The lecturer went on to deal with the subject of classification which had recognized two basic types—the long thins and the short thicks, blendings of which were found in great number and variety of expression. At his constitution clinic a somewhat different mode of reasoning had been adopted; namely if a special type of human being were necessary to the development of a given disease, then the presence of that disease pointed to a special constitution as its subject. Studying the personality of certain disease groups, particular ulcer and gall bladder groups, it had been found that the former were almost entirely the long thins while the latter were short stouts. Two other distinct influences had been noted which could not properly come under the two classes mentioned. They were the result of two distinct aspects of the growth and development process. One represented the various expressions of gynandromorphic phenomenon. (This phase was discussed in the second lecture). In the second case we had the effects of uneven growth and development rates among the different panels of the same individual. An example was the tall adolescent who appears older and mentally more mature than his years indicated yet found it difficult to make adequate social adjustments owing to retardation of his emotional development. This class indicated a totally different idiotypic pattern from the ulcer and the gall bladder classes.

With few exceptions, the speaker claimed, all classifications of human beings today were based upon morphology. Quoting from Hippocrates "some are hollow, and from broad contracted into narrow; some expanded, some hard and round, some broad and suspended, some stretched, some long, some dense, some rare and succulent, some spongy and of loose texture." Since his time under a variety of names we have had the two basic types, the long and the thick. Not much progress in classification has taken place in 2,500 years.

Dr. Draper observed types of lower jaws that appeared characteristic of each type; namely, the strong right angled jaw of the gall bladder race as opposed to the obtuse jaw of the ulcer race.

The clinician, however, should go farther than morphology. Following the advice of John Hunter he should at least think of the functional purpose of anatomical structure.

Regarding the immunological phase, everyone has noticed how various persons react to infective microorganisms. Susceptibility varied all the way from complete resistance to no resistance at all. Thanks to such methods as the Schick, Von Pirquet and Dick tests, it is possible to check up the individuality to certain epidemic diseases.

MINDBODY EMPHASIZED

The lecturer concluded with an account of the fourth or psychological attribute which he claimed was by far the most difficult aspect of the constitution to study. The general conception of the psyche was somewhat vague and ill defined. The proper conception of the psychic included the physical. The continuity of body and mind was stressed. The fusion of psyche and soma forced us to think of the animal organism Man as a totality or mindbody. The speaker studied his patient segmentally as indicated following with a synthetic correlation of his findings. The methods of studying the psyche consisted of direct observation of personal traits such as attitudes and gestures and the analysis of the conscious and unconscious mechanism.

"Clearly", said the speaker, "the study of human constitution is not an easy task, but it is a fascinating and proper one, and to it should be brought the best thought which many minds can provide. Medical schools should see to it that students are brought face to face with their ultimate responsibility; man in all his mystery and magnificence, before they are taught his disease. For we shall never comprehend disease until we understand both factors which produce it—the external agent and the phenotype."

SEX AND DISEASE POTENTIALITY

The second lecture dealt with "The Influence of Sex in Determining Human Disease Potentiality." Sex, it is known had profound influence upon structure and functional activities of an individual, though its chief importance was relative to the generation of new individuals. It

was the mechanism in the higher animals which insured the continuity of the species. The germ or sex cells were physiologically distinct from all other body cells in that they alone have the potency of existence from generation to generation. Furthermore, the germ cells existed in metabolic isolation from the rest of the body to the extent that they were rarely affected by destructive body metabolism. On the other hand, secretions from the germ glands had a profound affect upon the body, both structurally and functionally. Though the impression might be gained that the maleness or femaleness of an individual was dependent upon sex glands alone for their secretions, there were certain discomforting facts from the consideration of certain invertebrate animals. In the gypsy moth, for instance, the animal proceeded its evolution of male or female characters regardless of the gonad conditions as affected by operations. The gonads might be destroyed, or reciprocally transplanted without affecting the development of those characters ordinarily associated with male or female gonads. In the mammal and bird conditions were different. In the brown leghorn fowl and the Sebright bantam when the male was castrated and the ovaries are grafted in place characteristics that were essentially female appeared; when the female was spayed the spurs and comb and plumage of the male animal appeared. In mammals the replacement of testes by ovaries was associated with the development of female secondary sex characters. A further example of the labile condition of the body in response to sex gland secretions was the free martin of cattle. Here a male and female foetus had the same placental blood supply carrying secretions from the sex glands of both into the bodies of each twin. Abnormalities were found in the developing accessory sex characters of the potential female twin so that it becomes a sex intergrade, having poorly developed parts of both the male and female. Sex as a gross character in the higher animals was not to be thought of as an utterly predestined condition but rather as the resultant of the reaction of a sex gland or one type upon a body which had the potency of development along either path of sex specialization.

In castrated individuals there was found to be considerably more effect upon the male than upon the female. In fact the castrated male took to itself distinctly female characters. It was inferred then that the female followed more closely than the

male true neuter type of human—the ideal type of human if existed in a sexless condition.

The male possesses during his life a higher metabolic rate than the female; in fact, the greater activity of the male may be figuratively expressed in the activity and motility of the sperm with the quiescence of the ovum.

METABOLIC CHANGES WITH AGE

Each sex presented certain metabolic differences before puberty, during the period of sexual vigor and at the climacteric. For the medical practitioner these metabolic differences as related to sexual conditions had a profound effect upon the susceptibility of individuals to disease.

A consideration of this type on the effect of sex on individuals at different times of life presented an interesting relation to the problem of hermaphroditism. Clinically, hermaphrodites were differentiated into the rare true hermaphrodite who possessed both ovary and testes, the more common pseudohermaphrodite who possesses only one sex gland but whose accessory sex characters were partly those of one and partly of the other sex, and finally gynandromorphs whose sexual apparatus is normal yet who possessed secondary sex characters which approached those of the other sex. It was this last type which presented the so-called “femaleness of the male” and the “maleness of the female.”

The speaker gave a more or less detailed account of four cases of gynandromorphism, three male individuals and one female individual, which typified the morphological and psychological characteristics.

The three male cases presented a feminine distribution of hair and subcutaneous fat, pendulous breasts and more or less feminine psychic traits. In two the genitalia were small and atavistic and there was a partial in one and a total cryptorchidism in the other. Mentally there were strong feministic characteristics, lack of libido, in fact a tendency toward androphilia. The other male case showed evidence of normal sex life. The single female discussed presented a decided boyish figure, almost typical male baldness and male distribution of hair. The primary female characters were sufficiently distinct to allow conception though this was followed after a few months by abortion. The menstrual cycle was abnormal.

Attention was called to the relation in symptomatology between the adrenal cortex and the sexual condition. The two sys-

tems are associated in their embryonic development. And in tumors of the adrenal in adults there is noted a period of high functional activity followed by a period of depressed sexuality. The susceptibility to adrenal tumors was higher in women than in men and was usually associated with changes to virile secondary sexual characters. As had been indicated, the abnormal facies of an individual may be associated with an abnormal sexuality. There was likewise a profound relation between the sex and susceptibility to disease.

SEX RELATION TO DISEASE

In general males were more susceptible than females to disease conditions. It thus followed that there was probably a higher mortality rate among males, though this point may not be evident. Statistics were available which indicated that there were 160 male abortions to each 100 female, 130 male still births for every 100 female, and 104 male living births for every 100 female, and after a year there were 97 males and 100 females.

Dr. Draper enumerated fifty or more diseases for which one sex or the other had a predisposition. One interesting group of conditions was that which was definitely hereditary and was sex linked, being dominant in males and recessive in females. Hemophilia, coloboma, colorblindness, nystagmus and multiple sclerosis were diseases of this type. Some of the diseases which more readily affected men were gout, gastric ulcer, pneumonia, amoebic dysentery, angina pectoris, tabes, and alcoholism. Women were more often than men affected by migraine, hysteria, hyperthyroidism, influenza and obesity.

In conclusion it was apparent that the male and the female body reacted to the conditions of the environment differently; they are differently specialized and react differently. This difference was apparent in the relative incidence of disease. Disease might affect the body as a whole or it might have very localized effect such as were evidenced by hair distribution or local organ affection. It might thus be concluded that the condition of sex was involved in every cell of the body.

THE PHYSICIAN AND THE PATIENT

The third lecture of the series dealt with the relationship of physician and patient. Among the audience was a fairly large number of men and women not directly connected with the medical profession. There had always been criticism of the

medical profession, Dr. Draper went on to say, some of which partook of humorous references in the press and the stage. A form of criticism was to be found in the astonishing increase in cults and quackery. Yet no field of human endeavor could boast of such a galaxy of great names as the profession of medicine. Even Bernard Shaw who satyriized the physician in his *Doctor's Dilemma* would be one of the first to call in one of their number if he felt his heart giving out with the distressing shortness of breath.

Even in spite of the physician's honest efforts to improve the quality of his service, he would always be limited by more or less incomplete knowledge and by imperfect technique. The physician was also at times hampered by lack of cooperation on the part of his patient. By the patient's attitude towards his physician he might prove a valuable ally or on the other hand an opponent whom it is impossible to help. The speaker went on to dwell upon the patient's part in the peculiar relation of patient and physician.

ANTAGONISTIC NATURE OF DISEASE

Disease was compared to a quarrel between a particular set of qualities in the human being and a particular set of forces in the environment. Environmental forces may be physical, chemical, bacterial or psychological violence. To oppose these nature sets up defenses within the living organism, but the defenses may not be all of equal strength and it is the function of the doctor to discover the strong and weak links in the patient's defense chain. This meant an adequate understanding of the invalid and his peculiar environment. Individuals differed widely in their disposition towards the environmental factors which produced disease; that is, each one's weak point lay in a different aspect of his individual constitution. This was explained by the fact that two persons might be subjected to meningococci for instance and one would be unscathed while the other would succumb to the disease. The speaker went on to say that while a great deal of investigation had been done regarding the meningococcus very little had been done on man in relation to the disease, that is, regarding the reason two persons differ so widely in their reaction to the causative microorganism. Dr. Draper claimed that future medicine would study man as thoroughly as the environmental agents were now studied. This meant a study of human personality or constitution.

The qualities of human beings be divided into four classes; morphological, physiological, immunological, and psychological. The last included a careful history of the emotional life of the patient from his earliest childhood. It was necessary to correlate these four aspects which entered into the human constitution. "This conception of the unity of mind and body, welded together by the spark of life into an amazing, palpitating flux of vigor and sensibility," said the speaker, "is one we must hold before us constantly."

CIRCUS OF RINGS AND STAGES

Personality changed continuously from infancy to old age through successive epochs of development, such as prepuberty, pubescence, completed adult, climacteric and senescence. This was evidently due to shifting relationships within the glandular system. This phase of the subject was illustrated by means of a lantern slide diagrammatic of a great circus consisting of three rings and two stages. Within the rings and on the stages human beings went through acts in keeping with the capacities pertaining to each period of growth and development. The prepuberty ring included children from birth to thirteen or fourteen years of age; the parent was the ring master. This period of life was characterized by rapid growth, low resistance to infectious disease, and a marked capacity for imitating. The controlling instinct was self-preservation. The speaker dwelt upon the importance, particularly in regard to later life, of the reactions of this period on the psychic side. Children at this time were impressed for good or bad by the parent ring master. Sometimes the result was failure to attain full self-expression on the part of the child.

Then we come to puberty stage or the period of adjustment of the physiological forces. Here the ring master was the school teacher. Carrying out the metaphor, this was the age of the seals balancing balls on their noses or bears riding bicycles, their success or failure being rewarded by praise or punishment on the part of the ring master. There we had demonstrated the evils of mass education. This was the stage in which was developed self confidence or its counterpart the sense of inferiority.

The next stage was that of the mature adult; the director is somewhat ill defined but partook of the nature of a hampering influence.

The final was the "ring" of senescence

and the ring master was habit. If the preceding stages had been well managed the final ring might be the most interesting, useful and happy, "Grow old along with me, the best is yet to be, the last of life for which the first was made." With diminishing physical powers we had enlarging power of thought and creativeness. Creativeness in the realm of thought in the opinion of the speaker, had often reached its highest expression in this period.

One thing to be noted was the continual change which took place in human life much as we observed it in the circus. The biological forces within the individual were constantly ebbing and flowing.

"In the past fifty years or so, so much emphasis has been placed on the external cause of disease by the medical profession that physician and layman have rather come to feel that the emotional and psychological aspects of life have little to do with the production of ill health. But no thinking person can fail to realize that man is not divided into two compartments, one of which is mind and the other body. Human beings are not minds and bodies; they are "mind-bodies." This significant paragraph sounds the key-note of Dr. Draper's message.

In a curious way physicians stood in their own light. They in a way represented disease, because if it did not exist the physician would not be called upon. He represented to his patient a dual symbolism; namely hope and health and on the other hand disease and death. The last has its effect on the remote level of the subconscious mind. The fearsome element of the physician's symbolic presence was eliminated by mutual confidence between himself and patient.

THE PSYCHIC PHASE DIFFICULT

The most difficult problem for the physician was the investigation of the psychological phase of the constitution. Difficult as it was for many patients to submit to a physical examination, it was still more difficult to the stripping of one's soul in the presence of someone else. Patients frequently protested, wondering what the history of childhood frights and humiliations had to do with present indigestion, asthma or headache. The patient often demanded only medicine and a diet and very frequently went from doctor to doctor obtaining no satisfaction in the end. Most fears, however, vanished when squarely viewed. Thus we had the importance of both patient and physician scrutinizing the

details of the patient's emotional life history. There should not be any less attention devoted to the physical examination. But to omit study of this; namely, the psychic phase of the patient's constitution was as serious as to omit certain phases of the physical. It was the reciprocal masquerading of the mental and bodily symptoms that made the physician's work so difficult. Mental and bodily symptoms expressed in terms of suffering the unity of the whole organism. The great majority of ills with which patients come to doctors were not due so much to organic disease but poor adjustment between the psychological and physiological aspect of the individual. Every state of bodily suffering organic or functional included an emotional factor. Over-emphasis of the psychological aspect of physical disease was as dangerous as to exclude it entirely. It was the physician's place to apply the proper emphasis to each. In conclusion, the speaker predicted that the physician of the future would be called by an intelligent public to investigate not only the environmental or outward causative factors but also the defensive forces of the patient's total personality. Hence the necessity of mental confidence between physician and patient.

TUBERCULOSIS—PROGRESS MADE IN DETROIT, COUNTIES, AND STATE OF MICHIGAN

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ENGLAND*

The population of Detroit has risen in leaps and bounds, being at present over 1,700,000 for Greater Detroit. Having passed several cities in the last few years, it is now frequently predicted that Detroit will exceed the 2,000,000 mark of Philadelphia in 1930. Admittedly, too, the great stronghold of this city is industry. That means that the ages 20 to 30 years predominate, the age group which exceeds in death and sickness rates in tuberculosis. It is therefore apparent that as the industrial population increases, preventive and treatment means for tuberculosis should be increased and in greater proportion, but has that occurred?

Let us compare, for instance, the figures of Michigan with that of Pennsylvania: Michigan, 4,490,000 in 1926 (Greater Detroit, 1,702,314 in 1926). Pennsylvania,

* Medical Director Dubois Health Center (of the Tuberculosis Society of Detroit and Wayne County).

9,208,986 in 1924 (Philadelphia, 1,908,644 in 1923). The State of Michigan has but 228 beds in one institution, Howell, whereas Pennsylvania has built and maintains three large sanatoria with 1,600 beds. Furthermore, Michigan as a State does not maintain a single hospital or sanatorium accommodation for bed patients, while Pennsylvania, in addition to the above 1,600 beds, maintains hundreds of beds for the tuberculous in various hospitals and sanatoria in or near Philadelphia alone.

Comparing the City of Detroit with Philadelphia, however, we have an entirely different picture. Detroit has built and maintains two large institutions having 625 beds for tuberculosis, namely Herman Kiefer Hospital and Wm. H. Maybury Sanatorium, Northville. These hospitals are fully staffed and equipped to carry out all the up-to-date methods of treatment in this disease. In addition to the 625 above beds, within two years Herman Kiefer will have an increase of 200 beds and the Maybury Sanatorium, 60 more, making in all 885 beds. (This does not include the 100 preventorium beds at Northville.) The City of Philadelphia, on the other hand, maintains only the wing for tuberculosis in the Philadelphia General Hospital. As to dispensaries (out patient clinics), both cities maintain sufficient to cover the areas concerned, giving modern up-to-date service in all respects.

Thus it is seen that Detroit's measures have progressed rapidly in proportion to its growth while the State of Michigan is some 25 years behind. I do not desire, however, to give the picture that this city has sufficient beds for its tuberculous patients for the real facts are from such. In spite of having advanced rapidly, Detroit's program of beds for the next two years is insufficient. The present day aim is to have at least one bed for every annual death, but more on this position later. Much credit, however, must be given to the Detroit Board of Health for its wonderful work in spite of its small budget.*

There are 2,200 beds in Michigan including the County institutions, the Municipal institutions, private and semi-private institutions and the State Sanatorium at Howell. As to the counties, there are some who have institutions of their own, as Gogebic with 104 beds, Delta-Menominee, 73 beds; Houghton, 51 beds; Marquette, 33 beds; Schoolcraft, 25 beds, and Onton-

gon, 14 beds in the upper peninsula, but two having 50 beds or more. In the lower peninsula we have Calhoun, 54 beds; Kalamazoo, 50 beds; Ingham, 26 beds; Wexford, 25 beds; Jackson, 22 beds; Muskegon County Sanatorium opened June, 1925, and Oakland county, 165 beds, which opened June 15, 1927. Twenty-seven of 59 counties are modified accredited in bovine tuberculosis eradication, but apparently much less attention has been given to human tuberculosis in many of these.

It is apparent, too, that most counties, including Wayne county, have no beds whatever, this being a particularly outstanding fact inasmuch as Detroit and Wayne county together form almost one-third the population of the state and pay approximately one-half of Michigan's taxes. In three townships of Wayne county 18 patients have been waiting for beds. A vacancy was finally procured for one of these, but the patient was returned home because she was a bed case. Wyandotte has 23 cases registered. Monroe county has 73 diagnosed cases, while Oakland county has 53 cases of "positive and suspicious" tuberculosis.

Is prevention and treatment of tuberculosis the responsibility of the state or the county? Is Pennsylvania very generous, or is the State of Michigan recalcitrant. It has been rather a recognized fact that the responsibility of supplying beds is truly the state's. However, the county, as such, should take a share of that responsibility, as is now being done in some of the eastern states. It is in that way that rapid action may be forthcoming. *The matter of a larger number of sanatorium beds being built is urgent.* Taking mortality figures in tuberculosis in various countries, the number of deaths is generally less where the proportion of beds is greatest. In an exhaustive study on this subject Drolet enumerates the important factors as (1) Beds; (2) The general living and working condition; (3) Racial resistance.

HAVE A PHYSICAL EXAMINATION

Health generally has been given a great impetus, it is gratifying to see. One of the well advertised posters is "Have a yearly physical examination"—another is, "If you present any of the following symptoms of tuberculosis (symptoms enumerated) consult your physician or the Board of Health Clinics at once"—also, "An early case of tuberculosis is curable, whereas later it may be too late." However, requests for beds for cases only suitable for sanatorium

* In 1926 of each dollar raised by taxation in the City of Detroit 23.23 cents went for public education, 10.94 cents for police protection, .72 cents for fire protection, and only 2.96 cents for health.

are usually followed by long and longer delays with permanently damaging results.

Accordingly patients must be treated at home; too often in unhealthy surroundings and with children exposed to the infection. There is no doubt, however, that home treatment is preferable to institutional care in suitable cases. To be successful—and it can be—the carrying out of all the details of treatment is absolutely necessary. The population of Detroit, as in all of the big cities, includes a large foreign element, often not yet fully Americanized, with large families crowded in a few rooms at the best. Unfortunately, only exceptionally can we here get complete co-operation for home treatment in all the necessary details. This is shown very conclusively by our experiment in this demonstration area of treating 14 cases of pulmonary tuberculosis at home. In this work it was found that the first result of American influence is derogatory, but after the American influence becomes predominant, the beneficial factors reach a very high standard from a health co-operation angle. The nurses visited at least twice weekly and in several cases much oftener, the physician attending once a week.

In this day of rapid progress people are inclined to look for spectacular results. In many ways and occasionally in medicine their appetites have been satisfied. This cannot be said of tuberculosis, however. In addition to various other health improvements producing better results in this disease, however, there has appeared, if not a spectacular, certainly a great discovery in treatment—namely that of artificial pneumothorax. It is an outstanding fact in the campaign against tuberculosis that this great discovery can be used in only a small number of suitable cases because of the lack of beds both in Detroit and in the counties. This is equally true in the case of other very useful surgical procedures.

The City of Detroit Hospitals, Herman Kiefer and Wm. H. Maybury Sanatorium, are both well able to give the artificial pneumothorax treatment, as they are already doing in suitable cases. The ideal patient for this method is unilateral involvent with little or no adhesions. This means that it is necessary to get the disease early, for the more advanced the disease, the more difficult to get complete cures. For the actual treatment a hospital bed is advisable at first, but later in many cases the refills can be given in the outpatient department or in the dispensary,

the patient living at home and at times even continuing with his work. It should not be necessary to wait for such beds. The sanatorium best supplies the proper rest, fresh air, sunlight and nourishing food. It is also the place for graduated exercises until the patient is able to work, he being at the same time educated in how to live the ordinary home life under his changed physical abilities.

EARLY DIAGNOSIS ADVANTAGE

With the present aids, including the irreplaceable Roentgen ray, the diagnosis can certainly be made very early in most patients. However, in exceptional cases careful in-patient observation is required. It would result both in more cases being diagnosed as such who have tuberculosis and less cases being diagnosed as such who have not tuberculosis. This is more particularly true in children. It is most surprising how often complete signs of a lung condition in children, especially the younger ones, will clear up in two weeks and occasionally within 24 to 48 hours.

When the state or county, or both, build sufficient number of beds, the City of Detroit will be able to take further advantage of modern advancement in scientific treatment for tuberculosis, the city being equipped in personnel and material to do so now. All suitable cases could be admitted as soon as diagnosed, giving the patient the best opportunity for a complete recovery. Some of the city's beds could then be used for initiating artificial pneumothorax, and other beds for diagnostic purposes in doubtful cases.

TUBERCULOSIS DEATHS REDUCED 50 PER CENT

Reduction of deaths from tuberculosis in the whole United States was 50 per cent in the last 20 years. In the past year, however, there was a slight rise in deaths in the industrial groups, breaking the sequence of progressive death rate decline (this rise was probably due to increase in death rate in colored persons). The reductions have been rapid, but naturally the future progress will be much slower unless we make a further determined drive, the base of which is necessarily more sanatorium beds. By reducing death rate from tuberculosis 50 per cent since 1907, United States saved \$550,000,000 a year, or \$5.00 per capita of United States population. What has become of these savings?

"A family, in which a death from tuberculosis of either parent would have occurred under 1907 conditions and in

which such a death did not occur, has a resultant economic benefit greatly in excess of any amounts which it would expend for insurance. Almost certainly it has bought an automobile or possibly a series of automobiles. A large sum of this tuberculosis saving has gone into the pockets of Henry Ford, and from there into the upbuilding of that marvelous city by the Straits, which is rapidly becoming one of the wonders of the world.

"The General Motors Corporation recently distributed an enormous surplus. The savings resulting from the decrease in tuberculosis constitute one of the important factors in the fertilization of the field in which that melon was grown. The Standard Oil etc."*

SUMMARY

In spite of the progressively lowered death rate, tuberculosis is the most costly disease to the community, its victims coming largely from the industrial age group. "Death or disability at this time brings not only sorrow but actual privation and frequently is the direct cause of the breaking up of families. Money invested in the tuberculosis fight not only provides curative measures for individual patients, it helps to reduce the amount which otherwise has to be spent to maintain the widows and orphans of tuberculosis victims."

At present there is a great lack of beds in the cities, counties and State of Michigan. The Tuberculosis Society of Detroit and Wayne county, as well as the Tuberculosis Societies of the state and other counties, have greatly advanced in their educational program both in children and adults. Repeated physical examinations are urged, but this very useful work in prevention and treatment is only too often minimized because of the impossibility of getting institutional care. *The greatest source of infection is an open case of tuberculosis in a home containing children especially when overcrowding exists.* The longer the patient remains at home, the greater the risk of infecting the children. One might point out that when the disease is advanced the patient often puts aside preventive caution, and the family for natural sympathetic reasons follow suit. Hospitalization is thus usually best for such cases. (It is only fair to add that in overcrowding as above mentioned and in the case of boarders the City of Detroit

gives preference for beds, with comparatively early action).

If the state supplies the necessary beds, the City of Detroit particularly can use some of its beds for temporary hospitalization in artificial pneumothorax cases as well as in observation cases. There would thus be a great turn over with beneficial results for the maximum number of people. Advanced surgery, too, could be carried out in these institutions with possible convalescence in the state beds.

The Tuberculosis Society of Detroit and Wayne county is supplying a physician for tuberculosis clinics in the County of Wayne, while the Tuberculosis Society of Michigan is supplying physicians, some unpaid, for clinics throughout the state. In Wayne county health nurses are employed by the cities or townships in the areas having these clinics, for the following up and at times for home treatment. The Board of Health, City of Detroit, supplies physicians and nurses and has two large institutions, Wm. H. Maybury Sanatorium and Herman Kiefer Hospital. Tuberculosis is treated by very up-to-date methods in this city, including surgical procedure as well as home treatment in suitable cases. There is, however, lacking a large number of beds, completely handicapping and often nullifying useful procedure in other ways.

RECOMMENDATIONS

(1) The state should supply, as soon as possible, sufficient beds to make up the bed capacity to one for every death. This is a particularly suitable plan in Michigan because of the scattered population, nearly one-third of all the inhabitants being concentrated in Detroit and Wayne county. The high grade medical and surgical standards required for up-to-date successful tuberculosis work cannot be procured in small institutions.

(2) Howell should be continued and improved, a new institution at Ann Arbor built, and still another sanatorium—one of these to include 150 beds for children and having arrangements for heliotherapy, electrotherapy, etc. *All this to be done at once.* There is a present shortage of 700 beds, there being 2,200 private and municipal beds with an annual death rate in Michigan of 2,900.

(3) The county (or city) to supply tuberculosis clinics for treatment of ambulatory cases and for diagnostic purposes.

(4) The county (or city or township) to pay for local hospitalization for patients

* Homer Folks, "Reducing Tuberculosis Death Rate Saves United States \$550,000,000 a Year Now."—S.C.A.A. News, New York, November, 1926.

unsuitable or too far advanced to be sent to a sanatorium.

(5) The county (or city or township) to supply physicians and nurses care for home treatment cases. The best form of treatment for any given patient to be decided by the medical officer of health or local tuberculosis officer.

(6) Patients diagnosed as tuberculous having no symptoms, local or constitutional and able to do their usual work for a period of five years, without reaction, should be called cured and de-registered. This would greatly improve the social, personal and economic position of patients in whom the diagnosis of tuberculosis unnecessarily hangs over often throughout life. It also makes it possible to correct ill effects following incorrect diagnoses made hastily, particularly in children. (In case of a later breakdown, the patient is re-registered as tuberculous).

(7) Some of the wealthy inhabitants of the state could leave no better monument in their memory than by building and endowing a sanatorium for tuberculosis. This has already been done in many large cities of our country and aids immeasurably in solving the tuberculosis problem. Such an institution could be an isolated unit or affiliated with one of the larger general hospitals and built in the country.

(8) From discussions on the subjects of beds for the tuberculous the writer is satisfied that automobilists or the users of the roads, business men and farmers who benefit from better transportation facilities and automobile manufacturers all are willing that the next state road built shall be one from Lansing, branching to tuberculosis sanatoria. As to the working man generally who will benefit more directly from hospital accommodation, approval is automatically assured.

OCULAR EQUILIBRIUM AND HEAD PAIN*

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The association of what we now know as asthenopia and head pain was first described in 1776. A definite relationship was not suspected until Donders in 1864

opened the way for later observers to connect abnormalities of ocular equilibrium with the strain induced by the effort to maintain binocular single vision.

American ophthalmologists have been foremost in recognizing the reflex manifestations of eye strain which often closely simulate the curious symptomatology of some organic diseases.

So delicate an organ as the eye and so intricate a system as the laws which govern its motility should command serious consideration of the problems presented by defects in the one and of the other. It is the present purpose to review the fundamentals of muscular imbalance in their relation to pain in the head.

THE ESSENTIALS OF ROTATIONS

The posture of the eyeballs is adjusted by 12 extra-ocular muscles. Ocular movements are executed about the centers of rotation, which for practical purposes are found at the intersections of the three principal axes of each globe.

There are three planes of rotation: The sagittal, the frontal or equatorial, and the horizontal. The sagittal plane also defines the vertical meridian of the cornea. All rotations are calculated as having started from the primary position in which the visual lines are parallel, as they are in all normal conjugate movements.

Listing's Law substantially states that when an eye is turned from the primary position to a secondary position it is rotated about an axis that is at once perpendicular to both the first and second positions of the visual line or anteroposterior axis. Listing's plane is the equatorial plane. Listing's axes are all contained in this plane; they are vertical, horizontal and oblique. For a given rotation the axis remains constant throughout the movement.

Lateral rotations take place about the vertical axis; elevation and depression take place about the transverse axis. In all diagonal rotations up or down and to the right or left the axes are oblique. Diagonal movements necessitate an additional rotation, or torsion about the anteroposterior axis. With the exception of torsion all rotations are performed about one or another axis in the equatorial plane agreeably to Listing's law.

THE ESSENTIALS OF MUSCLE CAPACITY

A muscle can exert its maximum effect when its "axis of traction" approximates the plane that passes through the visual

* Presented before the Section on Ophthalmology and Otolaryngology of the Michigan State Medical Society at its 106th, Sixty-first Annual Meeting, Lansing, September 14, 1926.

axis and the center of rotation. Its field of action is in that direction toward which it can rotate the cornea the greatest distance.

All of the twelve extrinsic muscles participate in every conjugate rotation. The right lateral rectus assisted by the right obliques, and the left medial rectus assisted by the left superior and inferior recti rotate the cornea to the right. The superior recti and the inferior obliques elevate the corneae, while the superior obliques and the inferior recti depress them; in each case the lateral and medial recti steady the movement. The elevators and depressors each modify the action of the other.

The lateral and medial recti rotate Listing's plane on its vertical axis, and the elevators and depressors rotate it on its transverse axis.

When the cornea has been rotated temporally the axis of traction of the superior rectus corresponds to the sagittal plane of the globe; that muscle can then exert its maximum power for elevation. In this position the inferior oblique, the other member of the elevating pair, is so placed that its axis of traction corresponds to no rotational plane. In contracting it rolls the eyeball outward on its anteroposterior axis. This rolling or wheel-motion is called torsion. In this rotation the visual axis is directed up-and-out.

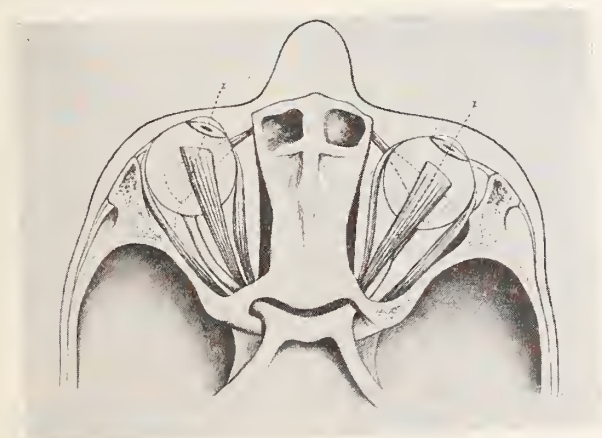


Fig. 1. Looking to right; ready to look up or down to right.

When the cornea is rotated nasally the axis of traction of the inferior oblique corresponds to the sagittal plane of the globe; that muscle can then exert its maximum power for elevation. In this position the axis of traction of the superior rectus corresponds to no rotational plane, so in contracting it rolls the eyeball inward. The visual axis is directed up-and-in.

The visual axis is directed down-and-out

by the lateral and inferior recti, with intorsion by the superior oblique. It is directed down-and-in by the medial rectus and the superior oblique, with extorsion by the inferior rectus.

Diagonal rotations are not executed by three distinct motions as implied; each one is effected about a definite oblique axis agreeably to Listing's law by the combined action of three muscles, no one of which can individually turn the eyeball about that axis. This provision means that the visual axes can be directed unerringly toward an object with the least expense of movement, time and energy. If any of the three muscles fail to function the visual lines will no longer be parallel.

THE ESSENTIALS OF INNERVATION

The complexities of binocular movements are exceeded only by those of the complicated nervous mechanism that regulates the movements.

The lateral rectus is supplied by the abducens nerve, the superior oblique by the trochlear, and the remaining muscles by the oculomotor. The basal nuclei of these nerves lie in paired series alongside the raphe beneath the floors of the cerebral aqueduct and the fourth ventricle. The oculomotor nucleus also supplies fibers which go by way of the ciliary ganglion to contract the pupil and perform accommodation. This relationship has significance in cases of ocular imbalance.

Cortical innervation for binocular movements comes from the frontal and occipital lobes principally. The frontal motor center for voluntary conjugate rotations has been located near the center for head movements. Its fibers pass down through the internal capsule, enter the pons and become related to pontine nuclei and to the abducens nucleus.

The nucleus of the sixth nerve includes a pontine center or it is intimately associated with one. Fibers from this nucleus are incorporated in the medial longitudinal bundle and establish connections with the nuclei of the third and fourth nerves. The eye makes few movements in which one or the other of the lateral recti is not dominant. Fibers likely pass from the pontine nuclei to the cerebellum, from the cerebellum to the colliculi, and from the colliculi to the nuclei of motor nerves.

The cerebellum is practically a nucleus for establishing muscular equilibrium; by its connections with the colliculi it supervises muscular co-ordination. The cerebellum is the organ of synergy and eu-

metria; it ratios the quota of impulse that goes to each muscle in any rotation. Co-ordinated muscular performance is necessary to comfortable binocular vision.

The occipital visuomotor center is located near the visual area. When visual stimuli reach this center a motor reaction occurs in one of two ways: Impulses go to the frontal area, or they go directly to the basal nuclei for involuntary or automatic conjugate rotations. This center presides over visual fixation and projection.

Fixation is an acquired faculty. Rays of light from an object enter the eye and meet the retina; the eye purposefully rotates until an image of the object is formed on the fovea. Both eyes participate in the search until each has secured foveal vision. By repetition bifoveal fixation becomes a firmly established habit. Since the visual lines extend from the fovea of each eye to the object under observation, parallelism must be maintained between them.

Binocular single vision signifies that both eyes fix or focus an object concurrently. It may amount to simultaneous macular perception in which the images are overlapped or superimposed; it is perfected by fusion of the images which affords stereoscopic vision.

The fusion area of the retina extends from the fovea 3 degrees up and 3 degrees down, 8 degrees nasally and 25 degrees temporally. Stimulation of this region excites powerful motor impulses for precise bifoveal fixation which is indispensable for faultless fusion. Stimulation outside this region probably sends impulses to the frontal area.

THE ESSENTIALS OF PROJECTION

By experience the individual habitually projects an image from each distinct point in the retina into a definite position in the visual fields. Let the eyes be fixed on an object straight ahead (Fig. 2,a;) a second object slightly to the right of the object of fixation will form an image at a certain point on the nasal side of the right retina and at a certain point on the temporal side of the left retina. When the second object is seen single (b) its image has fallen upon corresponding points of the two retinæ; when it is seen double (c) its image has fallen upon disparate points.

Binocular diplopia means that both a true and a false image of an object have been projected into the field of vision, because an object that forms retinal images at disparate points is projected double. Double projection indicates that the visual

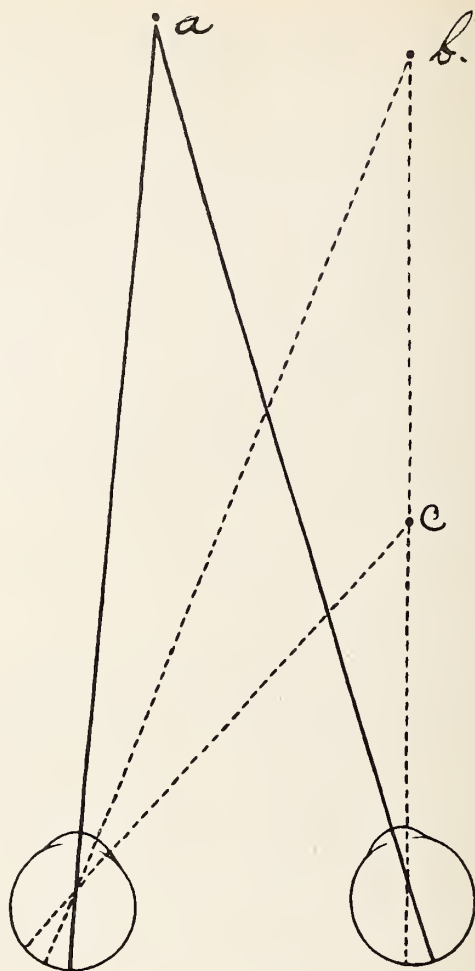


FIGURE 2

lines are not parallel; that is, one line of sight deviates from the other so that the two cannot converge upon any point in space.

ESSENTIAL DISTURBING FACTORS

Deviations are caused by one or a combination of several factors. Asymmetry in the size, shape and position of the orbits may be expected in cases of facial and cranial asymmetry. The origin, course and insertion of the eye muscles must differ, and the innervation required for the two orbits would be unequal.

Congenital muscular defects are not infrequent; anomalous development often means an attenuated and weak muscle. The point of origin is of less consequence than the point and direction of insertion into the sclera. For instance, when the medial rectus is inserted below the horizontal plane of the globe, every contraction of the muscle will be attended by some degree of torsion; this will give rise to subjective disturbances.

Innervation may be disordered not only between the muscles of the two eyes, but also between opposing muscles of one eye.

Convergence excess or insufficiency illustrates the binocular type, while a single muscle paralysis illustrates the monocular variety. Either kind will cause deviations; inequality of innervation is a source of distress.

The size, shape and curvature of the eyeballs may account for deviations. The short or hyperopic eye requires accommodative innervation in excess, and since this is associated with intrinsic motor impulses more nerve energy will flow into the medial than the lateral rectus as a rule. The obliques lose some abduction power since they are inserted further forward than usual on the globe. The long or myopic eye, on the contrary, is often associated with divergence because there is no accommodative stimulus to convergence, and because the obliques are inserted so far back on the globe that they are in a state of constant tension and therefore tend to abduct the cornea.

The corneal curvature may be responsible for ametropia and an associated muscular imbalance. Astigmatism requires uneven innervation in the ciliary muscle, and this inequality sometimes produces deviations. Anisometropia requires different degrees of innervation for the two eyes, and this is a source of annoyance.

Diseases and defects of the retina of one eye may so distort the images of that eye as to cause a muscular imbalance.

A healthy individual may be able to comfortably overcome a considerable degree of ametropia in one or both eyes until the age of presbyopia. The lens changes that have occurred by that time require a greater intensity of ciliary muscle innervation than had been previously needed; muscular imbalance follows very frequently. The person who delays the use of reading glasses, or who neglects his refraction is subject to visual discomfort.

DISCUSSION

A deviation is due to an overacting or to an underacting muscle. In each of the instances cited the anomalies and defects must be corrected by muscular effort if binocular single vision is to be preserved. Unless correction is effected diplopia results; that is, each retina projects the image that belongs to it into the binocular field of vision in harmony with experiences gained prior to the onset of disability.

A demonstrable deviation is designated strabismus, squint or heterotropia. A latent deviation is called heterophoria. Diplopia due to squint rarely causes pain,

but does produce disorders of orientation which disappear at once by occluding one eye. Latent diplopia is overcome by excess nervous energy supplied to one or more muscles. In time this may produce pain which is usually relieved only after prolonged occlusion of an eye.

Pain may be ascribed to one or more of three factors. Excess innervation tends to hold a muscle in a state of contraction over protracted periods of time without rest until fatigue ensues. Continued use of the eyes causes pain. When the nerve centers are exhausted the whole mechanism becomes disordered, and pain results from continued efforts to use the eyes. The strain of trying to overcome deviations sometimes produces intra-ocular and conjunctival hyperemia. This congestion is a source of pain.

Occupation is an important factor. A robust man who spends his waking hours in the great outdoors and reads little, especially by poor artificial light, is not in the same class with a weak, nervous and worried woman whose personal and family necessities require that she use her eyes intensely in near work such as sewing or stenography over long hours under poor working conditions. Incidentally, in refraction work among these latter patients dependable cycloplegia is introduced by scopolamin and homatropin more positively than by homatropin alone.

The location of the pain is sometimes significant. A pure refractive error usually causes pain in the brow, especially if but one eye is affected. When a refractive error is associated with or is responsible for muscular imbalance the pain is generally occipital. This irritation of retinal and choroidal congestion causes pain in the eyeballs, and it is often reflected into the occiput and neck. Vertex pains are only occasionally due to eye strain. Eye pain may appear over the insertion of a muscle.

Muscular and refractive defects may cause pain or they may excite conjunctival hyperemia, blepharitis or recurring hordeoli; they seldom produce both sets of symptoms.

CONCLUSIONS

1. There is little likelihood of pain when the visual and muscular error cannot be overcome by muscular effort, or while one image is suppressed.

2. Ocular equilibrium that is forced in the interest of binocular single vision will be accompanied by head pain in the majority of instances.

3. Pain is less dependent on the amount

of deviation than it is on the intensity of the nervous impulse that is required to correct it.

4. It is probable that the susceptibility of the patient through general weakness or exhaustion is more of a determining factor than any other in cases of disturbed ocular equilibrium and head pain.

AN EXTREME CASE OF OSTEOMALACIA

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BRINDABAN, INDIA

CASE REPORT

As osteomalacia is not discussed to any extent in the textbooks, the following case is submitted for publication by the doctor in charge of the Sarah E. Creighton Memorial Hospital at Brindaban, India.

It was on November 13, 1925, that we were called into Muttra, a city seven miles away, to see a patient who they said had been in labor since 2 o'clock that morning, when I found a very severe case of osteomalacia complicating an eight months' pregnancy.

Patient's name, Lakshmi; a Hindu female; age, 35; caste, Agarwali Baniya.

HISTORY

When she was a girl of nine years of age she had an attack of fever with pain throughout her body. She was married at the age of eleven and for one year afterwards she was quite well. At

the age of twelve she began having attacks of fever, which may have been malaria. Menstruation began at fifteen, and with each period she suffered severe pain in the back and lower abdomen, associated with fever. She had had three full term pregnancies at an interval of three years each; each pregnancy was marked by great suffering, fever, pain and general weakness, and the intervals by comparatively good health. All these children are living and were born without any difficulty. At the age of twenty-seven she had a four months' miscarriage, and within a year after this she noticed that the bones of her body were becoming crooked and she suffered intense pain. She had only slight relief by massage, enabling her to stand up a little; but by the end of a year, back, hips and legs were so bent that she could no longer use her feet. For three years she remained in this condition and then became pregnant a fifth time. Such was her condition that she couldn't even sit up without assistance; she had fever and the pain was very great. At the beginning of the ninth month she began having labor pains, and as usual native midwives were called, but they could do nothing for her. It was then that the family called on us for help.

The examination revealed a very enemic little woman weighing not more than fifty pounds. There were bends and twists in nearly every bone in the body. The mandible was crooked. In the upper right humerus the bone had bent to about a 135 degree angle. In the left humerus at the juncture of the middle and the lower thirds the angle was even greater. The sacrum had such an antero-posterior curvature that it was impossible for the patient to lie on her back without great discomfort. The pelvis was markedly compressed laterally. Both femurs were bent. The tibia and fibula of both legs were so bent, the thighs so contracted on the abdomen that the toes with difficulty could touch the bed. Her teeth were in very bad condition, and there was marked pyorrhea. The lungs throughout contained numerous fine and coarse rales with several areas of consolidation, probably tubercular.

Heart was slightly enlarged; a systolic murmur was present, the rate was 130-140, irregular. Temperature on admission, 100. Respiration, 34.

Pelvic measurements were as follows: Interspinal, 15¼ cm.; intertrochanteric, 19 cm.; inter-tuberosus, 3 cm.; intercrestal, 17 cm.; external conjugate, 17 cm.

A Caesarean section was decided upon in spite of the fact that the patient's condition was not especially favorable for any operative procedure.

Pre-operative treatment consisted only of an S.S. enema and a hypodermic of one-fourth grain morphine.

Chloroform anesthesia was given. Due to the cardiac and general condition of the patient, as soon as she was under the anesthetic and before the abdominal incision was made, a hypodermic of 1/40 grain strychnine combined with 1 grain caffeine sodium benzoate was given.

CAESAREAN UNDER DIFFICULTIES

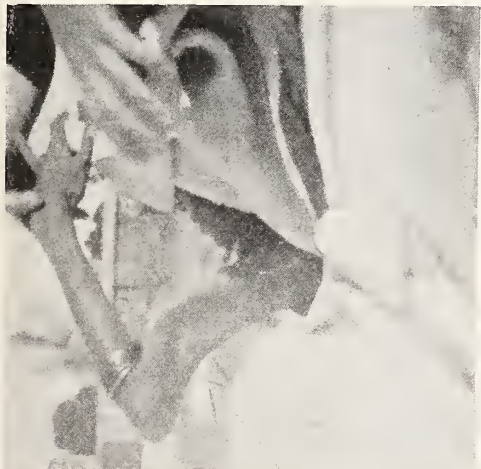
Due to the contracture of the thighs upon the abdomen, which did not give way even under deep anesthesia, the operation had to be performed under unusual difficulties. A high abdominal incision had to be made. In making the incision through the uterine wall the placenta was encountered. The baby was extracted and given to a nurse to be resuscitated. A hypodermic



Lakshmi, Hindu woman, showing bony deformities of legs.

of 1 c.c. ergot and 1 c.c. pituitrin were given at this stage. After the placenta and membranes were removed and hemorrhage checked, two rows of buried chromic catgut sutures were taken in the uterine wall and a row of catgut in the peritoneal coat. A cigarette drain was inserted and the abdominal wall closed in the usual way. To counteract shock 500 c.c. saline solution was given beneath the breasts before the patient left the operating room.

The patient was returned to the ward in a moderate degree of shock. The pulse, which had remained around 130 during the operation, was now 150 and at times irregular; 1 c.c. camphor in oil was given and the pulse improved. The



Lakshmi, Hindu woman, showing deformity in lower third of humerus left arm.

bleeding per vagina was rather excessive so 1 c.c. of ergot and 1 c.c. of pituitrin were given hypodermically. A shock enema of strong tea was also given. The patient's condition gradually improved. At 9 p. m. she became restless and a hypodermic of $\frac{1}{4}$ grain morphine was given. At midnight she had a temperature of 101.6 by mouth, which was down to normal the next morning.

During her convalescence she ran a typical T. B. the whole three weeks she was in the hospital. The drain was removed on the third day. The drainage was normal, and the rest of the wound healed by first intention. The sutures were removed on the seventh day.

She was given cod liver oil with phosphorus dram 1 t. i. d. and acetyl salicylic acid gr. 10 t. i. d., also massage and liniment to control the pain, which was especially marked in the contracted muscles. At the end of three weeks she and her baby were taken home by the family.

No doubt, if she could have had proper treatment in the beginning, splints applied to prevent the muscle pull from bending the bone shafts, and massage to prevent muscular atrophy, she would have been spared a great deal of suffering. A fact that seemed very interesting was that there was not a general softening of the whole bone, but there were foci of softening. This was demonstrated by the deformity in the right humerus, being at the juncture of the middle and upper third, while in the left it was at the juncture of the middle and lower third. So sharp was the angle of deformity, as though a fracture had occurred. There was a thickening of bone at the areas of bending, showing evidence of osteitis and periostitis. Such a nodule was found

at the middle of the ulna on the left, but the radius being a good splint, there had been no deformity.

So little is known about the etiology and treatment of this disease that there is not much that can be said in discussion. In India it seems to be very common amongst the caste of people to which this woman belonged. It is considered that the unsanitary conditions, improper food and the lack of fresh air, sunshine and exercise in their lives have much to do with the cause of this disease.

Dr. Rita Tower, who has contributed the interesting case of Osteomalacia, is a daughter of Mr. and Mrs. D. R. Tower of Holly, Michigan. She graduated from the University of Michigan Medical School with the class of 1921. She served an internship for one year at the Women's and Children's Hospital, Boston. She is supported by the Women's Foreign Missionary Society of the M. E. Church.

THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS

GERALD B. WEBB, M. D.

COLORADO SPRINGS, COLORADO

The chain of thought which will lead a physician to the successful early diagnosis of pulmonary tuberculosis must resemble the firmly fixed chain by which Aristaeus held Porteus when he changed in rapid succession into fire, flood, and a horrible wild beast. The links of the chain are composed of the constant thought "tuberculosis" no matter what protean sign or symptom the patient presents. In the case of practically every disease the physician must consider the possibility of tuberculosis. He should expect to be able to make an exact diagnosis of tuberculosis in at least two per cent of his clientele. Easy exhaustion, digestive disturbances, headaches, nervous irritability, insomnia, fever which at times may resemble typhoid, tachycardia, malaise, anemia, weight loss, pain in the chest, local and general sweats, frequent throat clearing, fistulae, blood spitting, susceptibility to colds, dry or productive cough, disorders of menstruation, are some of the symptoms and signs which call for most careful investigation for pulmonary disease. The most important part of the study of each patient is the careful taking of the history. The next most important step is the close scrutiny of the patient by the trained eye of the clinician. It is a stigma on the medical profession that lay people who have been closely associated with the tuberculous, as in a health resort, can recognize a consumptive type long before many physicians can make an exact diagnosis. The toxin of the disease creates objective and subjective signs such as wasting of the neck muscles, flushed cheeks, glistening eyes, a delicate appear-

ance, easy fatigue, temperamental disturbance and even a weakened voice; any of which should arouse suspicions of tuberculosis. On the other hand, advanced tuberculosis may be present in some people with absence of such symptoms.

PHYSICAL EXAMINATION

Inspection will reveal a lagging of one or both lung apices.

Palpation enables a confirmation of possible lagging, determines the excursion of the chest wall, detects the increased or decreased vocal resonance, the position of the heart apex beat, which may be changed by a diseased lung, and the position of the trachea, whether misplaced to right or left. Percussion is valuable in detecting impaired resonance at the lung apex, and percussion with the tips of all five fingers, as advocated by Auenbrugger, who introduced the art, is very valuable over the bases of the lungs to bring out basal lesions, thickened pleura or pleurisy.

Auscultation is probably the most important means of investigation. Changes of the breath sounds such as prolonged, high-pitched expiration, quiet breathing and rales are to be noted. It is best to begin auscultation by placing the stethoscope in the lower axilla, and moving the bell upward after each expiration. To determine the presence of rales the patient should be instructed to breathe in through the mouth, then to breath out and to give a slight cough with the last part of he outgoing breath. Rales are apt to be heard in showers, and usually occur after the cough at the time the breath is inspired. They should especially be sought at the apices posteriorly and above and below the clavicles. It must be remembered that occasionally the residual fractions of the broncho-pneumonias of influenza may for a while give rise to a shower of rales similar to tubercle.

X-RAY EXAMINATION

The X-ray films should always be inspected by the clinician. Special technic is needed to produce proper X-ray pictures of the chest and it is a serious matter that so many poor films are taken. The X-ray may indicate that tuberculous lesions found on physical examination are actually more extensive or at times less extensive. Areas of tubercle deposits are frequently found in healthy people at the roots of the lungs. The films should be carefully inspected for tubercle lesions in the parenchyma of the lungs.

Fluoroscopic study is of value in noting the lung aeration and the excursion of the diaphragm. Early diagnosis rarely can be made by the fluoroscope and, generally speaking, film study is the more essential.

LABORATORY EXAMINATIONS

Specimens of sputa should be taken and sent to a reliable laboratory. At times many specimens are necessary before a positive diagnosis can be made. Patients often relate that, suspecting their own conditions in spite of negative findings by their physicians, they have of their own accord sent sputa to public laboratories and the correct diagnoses have been made. There are no reliable blood tests for the detection of tuberculosis. An increase in the white cell count and a decrease, or at times increase, in the total lymphocyte element are at times suggested.

TEMPERATURE STUDY

Any person suspected of pulmonary tuberculosis should be put to bed for at least a week and the temperature and pulse carefully studied. One or two temperature observations at the time of office visits are most unreliable. An afternoon or evening temperature of 99 or over needs explanation. The resting pulse should be normal in a heavy person. In patients with tuberculosis it is almost always accelerated.

TUBERCULIN TESTS

The skin tuberculin tests have no value in the diagnosis of adult tuberculosis. The subcutaneous test can be used by experts only.

DIFFERENTIAL DIAGNOSIS

Almost any disease from hookworm to aneurysm may suggest tuberculosis. Repeated negative sputum findings should always lead to a careful search for bronchitis or bronchiectasis associated with infection of the nasal accessory sinuses. In such cases the rule should be to order X-ray pictures of the sinuses. Lung abscess, and rare chest diseases such as aspergillosis, streptothricosis and even syphilis are conditions the tuberculosis specialists are constantly watching for. Thyrotoxicosis is a condition which may resemble tuberculosis especially in weight loss and in fever and pulse variations. A definite increase found in the metabolic rate determines the diagnosis in favor of hyper-thyroidism. Possibly the greatest difficulty in differential diagnosis is found among patients in whom occult tuberculosis is suspected. They may have no cough

and present no physical signs, and parenchymatous lesions of the lungs are not detected by the X-ray. In these people, most frequently women, a daily elevation of temperature is noted and also an accelerated pulse. A careful investigation must be made in regard to the thyroid gland, tonsils, teeth, gall bladder and pelvic organs before a diagnosis of occult tuberculosis is made. Tonsils should not be removed, especially in adults, unless a very careful study of the chest has been made.

The early diagnosis of pulmonary tuberculosis would be more often made if physicians would keep uppermost in their minds the frequency of the disease and their responsibility to be constantly alert to the possibility of tuberculosis in so many maladies for which they are consulted.

NOTE—This article has been submitted for publication in The Journal of the Michigan State Medical Society by the Medical Adviser of the Michigan Tuberculosis Association.

CASE REPORT

E. B. ANDERSEN, M. D.,
GRAND RAPIDS, MICHIGAN

While congenital imperforate hymen is described in considerable detail with other vaginal atresias in every text book in gynecology, the condition is seldom found in one's practice. As a scientific curiosity such cases are of interest and the following report is submitted.

May 31st, 1927 the case of Miss V. C., age 15, the oldest of several children, was referred to me by another physician. The patient had been thought to be in labor on account of the severe lower abdominal pain and some abdominal enlargement. The history of the case was as follows: Patient had had a sudden onset of severe abdominal pain about one hour previous to my seeing her. Her only other complaint was inability to void urine. On closer questioning it was found that the girl had never menstruated although she had had menstrual symptoms at varying intervals for the past two years. Some of the menstrual symptoms approached the present symptoms in severity. The patient had previously been taken to various physicians for advice regarding the amenorrhea. On these occasions emmenagogues had been prescribed. Her personal and family history was entirely negative. On examination, patient was a woman in the adolescent period, was up and about, but apparently in agony simulating labor. The breasts were apparently normal for a girl of her type, the abdomen was distended to the umbilicus with dullness to this level but no rigidity. On inspection of the vulva the bulging tense hyperemic membrane was occluding the vaginal orifice. It was perfectly evident that the case was one of vaginal obstruction and that conception or pregnancy was out of the question. The patient was otherwise physically normal.

Surgical removal of the obstructing membrane released a quart or more of dark unclotted blood which had collected and enormously distended the vagina. The membrane was at least one-

eighth inch thick and had to be excised completely in order to prevent a future stenosis of the vaginal orifice. The patient's symptoms disappeared immediately. She has menstruated regularly since the operation. Examination revealed normal pelvic organs. This case is, therefore, one of congenital imperforate hymen with hematocolpos.

CHILD'S GROWTH COMPARED WITH CALF AND RABBIT

Mothers who are appalled at the bean-stalk speed with which children seem to grow out of their clothes can be thankful that little boys do not sprout up as fast as rabbits, cows, and guinea pigs. Charts comparing the growth of children with that of farmyard animals have been worked out by Dr. Samuel Brody, of the Missouri Agricultural Experiment Station. Reporting his results in science, Dr. Brody shows that a child between four and fourteen years of age grows at the rate of only 10 per cent a year, whereas young farm animals grow at the rate of 1,000 per cent in a year. Reduced to days, this means that in less than four days the young animal gains as much as the child gains in a year. The juvenile period in man spreads over an enormously long period of time compared with that in domestic animals, Dr. Brody states. Children who have not grown fast between four and twelve years often shoot up rapidly between twelve and fifteen. This appears to be in the nature of compensatory growth for an earlier deficiency, Dr. Brody concludes. Children who have grown more rapidly in earlier childhood do not seem to have this acceleration in their teens.—Science Service.

HUNDRED SKELETONS TO REVEAL CHARACTER OF MAYA RACE

A hundred skeletons and 2,500 records of the size and other physical characteristics of living modern Maya Indians of Yucatan brought back to Peabody Museum by Dr. and Mrs. G. D. Williams may give an insight into the kind of people who erected great cities and developed a culture in America long before the coming of Columbus. During an anthropometric survey of the Mexican state of Yucatan, Dr. Williams obtained information on 2,000 adult and 500 children of the descendants of the ancient Maya and also secured for scientific study the skeletons of a hundred present day Mayas. Metabolic tests were included in the studies. The expedition that was in the field for eight months was under the auspices of the Bureau of International Research of Harvard University and Radcliffe College.—Science Service.

THE POWER OF ROUTINE

A physician in town specializes in spinal cases. To save time he has his nurses strip everyone to the waist before he sees them.

A young woman insisted upon seeing the doctor, so the nurse told her that she would have to prepare for the consultation. When her turn came, the doctor faced a frightened young woman undraped to the hips.

"Well, what's your complaint?" he asked.

"I'm afraid, doctor, that it's a mistake on your nurse's part," she panted. "I merely came to see if you would renew your subscription to the New Yorker."—Illinois State Medical Journal.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner*

PROVISIONAL RATES FOR 1927

The following rates are submitted as provisional rates for 1927 and are subject to correction by delayed reports, but it is improbable that the rates themselves will be affected although there will be a slight increase probably in the number of births and deaths.

In common with other sections of the country, Michigan experienced a slight decrease in the birth rate. There were reported in 1927, a total of 98,891 births as compared to 98,289 in 1926, an increase of 602 births. The rate, however, for 1926 is equivalent to 23.0 per 1,000 population; whereas, with the estimated increased population for 1927 the rate is 22.5 per 1,000. A falling birth rate is always unfortunate for any community but this condition seems to be common throughout the United States.

A much more satisfactory showing is found in the death rate. In 1927 there had been reported 50,434 deaths as compared to 54,080 in 1926. The death rate for 1926 was 12.7 and for 1927 it was 11.5 per 1,000 population. This is a decrease of 1.2 per 1,000—equivalent to approximately nine per cent.

Infant mortality—In 1926 there were 7,630 deaths of children under one year of age. This was reduced in 1927 to 6,754, the infant mortality rate falling from 77.6 per 1,000 living births in 1926 to 68.3 in 1927. It is certainly a matter of congratulation that there are almost 1,000 more babies living in Michigan today than would have been living if the rate for 1926 had prevailed.

In the matter of maternal mortality we are not so fortunate. It seems exceedingly difficult to make very much impression on this rate. The literature of medicine is constantly referring to improved methods of obstetrical practice but still we continue to lose about the same percentage of women in childbirth. In 1927 there were 661 deaths from this cause as compared with 631 in 1926, the rate rising from 6.4 per 1,000 births in 1926 to 6.7 in 1927. In figuring this rate on the basis of a thousand births we are able to give a rate that represents the number of deaths per 1,000 exposures to death from this cause and it

is to be regretted that we are not able to reduce this rate to a point where it is comparable with some of the European cities.

We are, of course, unable to tell at this time much about the causes of death but some interesting things might be commented upon. For instance, typhoid fever, which is probably more amenable to sanitary control than any other one disease, has a rate for 1927 of 2.1 as compared with 2.8 per 100,000 population in 1926.

Scarlet fever shows a satisfactory decrease in the death rate although the case incidence of the disease continues very high, the rate for 1927 being 3.8 per 100,000 population as compared with 5.5 in 1926.

Diphtheria seems to be responding to the intensive work that has been carried on in this department for several years, the rate being 11.7 per 100,000 as compared with 15.8 in 1926, but is materially higher than in 1925, when the rate was 8.5.

Tuberculosis again makes a very satisfactory showing, the rate for tuberculosis (all forms) being 66.9 per 100,000 population as compared with 71.2 in 1926.

Cancer, however, in spite of the fact that we are told that it is rapidly increasing, showed only a very slight increase from 93.2 in 1926 to 94.0 in 1927.

Cerebral hemorrhage showed a slight decrease from 100.5 in 1926 to 93.2 in 1927. Heart disease remained almost stationary, the rate for 1926 being 169.9 and for 1927 it was 169.0. A very satisfactory decrease is shown in lobar pneumonia which was reduced from 60.7 in 1926 to 46.9 in 1927.

Nephritis (acute and chronic), which showed a rate of 79.9 in 1926 shows a rate of 70.2 in 1927. Diarrhea and enteritis in children under two years of age fell from a rate of 25.5 per 100,000 in 1926 to 21.8 in 1927.

In deaths in early infancy which includes congenital malformations, premature birth, injury at birth, and other conditions peculiar to early infancy the rate fell from 91.2 in 1926 to 85.3 in 1927, certainly a very satisfactory showing and one factor which accounts for the lowered infant mortality rate discussed above.

Automobile accidents again showed a

considerable increase. There were 1,204 deaths due to automobile accidents alone; 81 as a result of collision between an automobile and railroad train and 50 as a result of collision between automobile and street car. That makes a total of 1,335 deaths in which the automobile was involved, certainly an exceedingly unfortunate showing. This is equivalent to a rate of 30.3 per 100,000 population as compared with 25.4 in 1926.

It should be remembered as stated at the beginning of this story that these figures are provisional and subject to correction on the receipt of delayed returns, but it is important that the changes made will be significant and as a whole the record certainly points to a very exceptional year in 1927.—W. J. V. D.

THE HEALTH OFFICER'S MANUAL

(Continued)

DISINFECTION

(A) Definition and Explanations:—

Disinfection defined—For the purpose of these rules and regulations, the term "Disinfection" shall mean the exercise of such specific measures for each disease and each infectious discharge and each infected article as will render them innocuous and harmless.

1. Quarantine shall not be terminated until all the directions for concurrent disinfection shall have been carried out in compliance with these rules and regulations and to the satisfaction of the local health officer.

2. Concurrent disinfection shall mean the immediate disinfection of the infectious discharges and the fomites at the earliest possible moment after they have left the patient.

Concurrent disinfection shall be carried on at all times during the illness of the patient and as long thereafter as required by the local health officer.

(B) Methods of Disinfection:—

a. How to Disinfect During Quarantine:

1. Normal and abnormal discharges from the eyes, ears, nose, throat, skin lesions and glands may be disinfected by being collected on bits of cotton, paper or cloth and burned at once.

2. The hair and skin of the patient or attendants may be disinfected by washing with soap and water.

3. Bed clothes, pillow slips, sheets, night gowns, towels, washcloths or any other cloth or clothing of any kind may be dis-

infected by being boiled with soap and water for fifteen minutes before leaving the premises of the quarantined area, if the case is quarantinable.

A washboiler or tub shall be kept in the sick room one third full of cold water. All cloth or clothing used by the patient shall immediately be placed in this cold water.

Once a day, this tube shall be taken to the stove and allowed to boil for fifteen minutes. Clothes so treated may be hung out to dry. Prompt moistening and boiling is much better than immersion in any disinfectant.

4. Dishes, glassware, knives, forks, spoons or any utensils used in feeding the patient shall be promptly disinfected by being washed and boiled.

Dishes used by the patient shall not be used by other members of the family but shall be set aside for the use of the patient only.

5. Food from the sick room shall never be eaten by anyone but shall be collected and boiled or burned at once.

6. Thermometers, rectal tubes, douche nozzles, etc., shall not be removed from the sick room until the termination of the case. They shall be washed clean with soap and water after each use.

7. Water that has been used to bathe the patient shall be boiled fifteen minutes before being discarded unless it is immediately put into a sewer system.

8. Bowel discharges. Disinfection of the bowel discharges, when required in these rules and regulations, shall be carried out by adding five tablespoonsful of freshly opened chlorid of lime to a liquid stool and stirring the mixture until all parts of the stool have been thoroughly mixed with the solution. This mixture should be allowed to stand, protected from flies for thirty minutes before being discharged into a sewer or privy vault.

Solid stool should have one pint of water added and be thoroughly stirred until stool assumes a liquid character and all lumps broken and then treated as described above.

9. Bladder discharges. Disinfection of bladder discharges, when required in these rules and regulations, shall be carried out by stirring three tablespoonsful of freshly opened chloride of lime into each passage and allowing this mixture to stand thirty minutes before being discharged into a sewer or privy vault.

10. Bed pans and urinals shall be thoroughly cleaned each time after use and

rinsed out and left containing a small amount of dry chlorid of lime.

b. How to Disinfect After Quarantine:

Terminal disinfection shall be done at the end of the quarantine period and shall mean the exercise of those processes which will render the person, the personal clothing and the immediate physical environment of the patient free from possibility of conveying infectious agents.

1. Terminal disinfection of the person, rooms or dwelling shall be carried out by the use of soap and water, fresh air and sunlight, as is found necessary for the individual case.

2. The use of any sort of fumigation or chemical is not required and is only advised in special circumstances.

3. Terminal disinfection of all clothes, bed clothes, thermometers, rectal tubes, dishes, glassware, etc., which have been exposed to the patient while he is giving off infectious material shall be carried out as described for concurrent disinfection.

4. Bedsteads, chairs, tables, floors, doors, woodwork, windows, etc., shall be scrubbed with soap and hot water.

5. All bed clothing, pillow slips, sheets, night gowns, towels and any other cloth or clothing of any kind that has been in contact with the patient shall be disinfected as provided in Section IV, B (2).

6. Milk bottles, milk pails or food containers of any sort shall never be allowed to leave the quarters until the termination of the case or of the quarantine. If milk bottles, milk pails and food containers are brought into the premises or the quarantined areas, they shall be allowed to collect during the whole period of illness or of quarantine and be thoroughly sterilized by being completely immersed in boiling water for 15 minutes, after the case terminates or the quarantine has been lifted.

7. It is recommended that a pitcher or other suitable container be placed outside the door of the premises of the case or of the quarantine and that the milk man pour his milk into it and carry his bottle away immediately. Having touched nothing or exchanged nothing, there will be no contamination and the uncertainty of sterilizing accumulated bottles at the termination of the case or of the quarantine will be entirely avoided.

8. If a case of communicable disease has to be nursed at home, all unnecessary furniture, draping, curtains, rugs, etc. should be removed from the room where the case is to be treated or quarantined, especially all furnishings that cannot be

readily cleaned and disinfected as described in these rules and regulations.

9. As far as possible only such books, papers, magazines and toys should be given the patient as are of little value, and these shall be destroyed by burning when the case is released.

MICHIGAN PUBLIC HEALTH ASSOCIATION

At the Annual Meeting of the Michigan Public Health Association held in Lansing in January in conjunction with the Seventh Annual Public Health Conference, the following new officers were elected:

John Sundwall, M. D., President, (Director, Department of Hygiene and Public Health, University of Michigan, Ann Arbor); Ellis J. Walker, R. N., Vice President, (Western State Teachers College, Kalamazoo); W. J. V. Deacon, M. D., Secretary-Treasurer, (Director, Bureau of Records and Statistics, Michigan Department of Health, Lansing).

Directors:

T. J. Werle, Michigan Tuberculosis Association, Lansing; Grace Ross, R. N., Department of Health, Detroit; R. C. Mahaney, M. D., Owosso; Don M. Griswold, M. D., D. P. H., Michigan Department of Health; Wm. J. Stapleton, M. D., Chairman, Public Health Committee, Wayne County Medical Society, Detroit; Guy L. Kiefer, M. D., D. P. H., Representative to the Governing Council of the American Public Health Association.

ACTIVITIES IN MOUTH HYGIENE

Increased interest is constantly being shown in the subject of mouth hygiene as evidenced by the number of requests for educational material and for the assistance of the Bureau of Mouth Hygiene in starting or aiding programs in this behalf.

The director is spending all the time possible in the field, entirely upon request, and is more than encouraged by the interest and co-operation shown.

The field work consists of a careful examination of one schoolroom with as many adults present as possible, an examination clinic or conference with local dentists, and addresses before local organizations, especially parent-teacher associations.

The examination is proving especially popular as a means of showing the necessity of dental care, as well as giving first hand data as to conditions. The average in second grades (seven year old children) for all localities visited is as follows: 86

per cent need filling or extraction or both, 56 per cent already have cavities in permanent teeth and 55 per cent have definite mouth infection. In many cases the children have not one or two but six and eight abscessed teeth and are decidedly underweight.

In Hillsdale, a school dental outfit has been purchased by the Kiwanis Club at a cost of more than \$500. Local dentists gave their services for a half day a week at first, for the care of indigent cases, until the school board was able to employ a dentist regularly for this purpose.

At a demonstration examination in a country school in Wayne County, one-half of the mothers were on hand at 9 o'clock in the morning to see their children examined. At another school in the same county the schoolroom was packed on a rainy, foggy night, to hear a talk on mouth hygiene.

At Ypsilanti, eleven out of twelve dentists came to an examination and the luncheon which followed it. The superintendent of the Training School was very enthusiastic about the examination as a method of showing prospective teachers the importance of mouth hygiene.

Hamtramck has under way a very comprehensive program, directed by a dental hygienist.

A good indicator of the state-wide interest in this phase of health is the steady demand for the educational leaflets. Since July, the beginning of the state's fiscal year, a total of 153,570 such leaflets have been sent out. Like all department publications, these are sent free of charge, but only upon request.—W. R. D.

JANUARY'S COMMUNICABLE DISEASE RECORD

The communicable disease situation for January was quite satisfactory. Compared with January of 1927, there was a decrease in most of the diseases, a slight increase occurring in the case of whooping cough and a noticeable increase in measles.

It is apparent that measles is again experiencing a periodical rise and in view of this fact it is exceedingly important that it receive special attention. It must always be remembered that measles is exceedingly fatal to young children, and due to the fact that it seems to be most communicable during its prodromal stage great care should be exercised by the parents of young children to avoid the possibility of exposure.

All of the venereal diseases show a con-

siderable increase in the number of cases reported, due probably to the operation of the chauffeur's law which has required the taking of the bloods for examination from many men, with a showing of approximately 5 per cent positive Kahn or Wassermann tests, which resulted in an increase in the number of reports.

PREVALENCE OF DISEASE				
January Report				
(Cases Reported)				
	December 1927	January 1928	January 1927	Av. 5 yrs.
Pneumonia	469	484	661	771
Tuberculosis	426	404	647	429
Typhoid Fever.....	49	24	26	41
Diphtheria	460	352	499	636
Whooping Cough.....	444	594	560	631
Scarlet Fever.....	1,020	1,091	1,438	1,486
Measles	1,212	1,539	523	1,787
Smallpox	144	168	171	280
Meningitis	12	10	10	15
Poliomyelitis	16	7	8	4
Syphilis	924	1,496	1,033	1,026
Gonorrhea	654	855	705	795
Chancroid	4	12	7	14

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health.				
January, 1928				
	+	—	+—	Total
Throat Swabs for Diphtheria				1065
Diagnosis	32	275		
Release	39	91		
Carrier	11	609		
Virulence	3	5		
Throat Swabs for Hemolytic				
Streptococi				769
Diagnosis	83	66		
Carrier	27	593		
Throat Swabs for Vincent's.....	29	278		307
Syphilis				8811
Wassermann		1		
Kahn	1230	7526	53	
Darkfield		1		
Examination for Gonococci	174	1319		1493
B. Tuberculosis.....				328
Sputum	56	272		
Animal Inoculations.....		17	1	
Typhoid				172
Feces	15	70		
Urine		15		
Blood Culture.....	1	33		
Widal	5	33		
B. Abortus	3	37		40
Dysentery				57
Intestinal Parasites.....				27
Transudates and Exudates.....				135
Blood Examinations (not clas- sified)				144
Urine Examinations (not clas- sified)				330
Water and Sewage Examina- tions				516
Milk Examinations				63
Toxicological Examinations.....				13
Autogenous Vaccine				4
Supplementary Examinations.....				157
Unclassified Examinations.....				834
Total for the Month.....				15233
Cumulative Total (fiscal year) Increase over this month last year				89225
Outfits Mailed Out.....				3561
Media Manufactured, cc.....				17325
Antitoxin Distributed, units.....				281300
Toxin Antitoxin Distributed, cc.				34911000
Typhoid Vaccine Distributed, cc.				8710
Silver Nitrate Ampules Dis- tributed				1010
Examinations Made by Hough- ton Laboratory				6416
Examinations Made by Grand Rapids Laboratory				2160
				7604

THE JOURNAL

OF THE

Michigan State Medical Society

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MARCH, 1928

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

SEVENTEEN YEARS OF SERVICE

Not many men in the active practice of medicine have been able to devote themselves untiringly to the service of the profession as a whole. And often such service when rendered is not accredited the mead of praise that it deserves. To get out the numbers of the Journal with almost clock-work regularity entails a self discipline on the part of an editor that is demanded of no other man. Dr. F. C. Warnshuis has been editor and business manager and secretary as well for seventeen years. For a number of years his activities have extended beyond the confines of Michigan inasmuch as he has occupied the position of Speaker of the House of Delegates of the A. M. A. Among his literary endeavors is his Principles of Surgical Nursing which appeared eight years ago and has since gone through five editions.

Besides his editorial connection with this Journal, he is associate editor of the A. M. A. Bulletin and also of the American Journal of Surgery. Dr. Warnshuis has set the standard high and it is the hope

of his successor that the standard may not be perceptibly lowered. The readers will be gratified to know that Dr. Warnshuis continues as secretary of the Society and business manager of the Journal. The dissociation of the editorial from the business management is calculated to make the duties less burdensome to both editor and business manager, who needless to say are both physicians in active practice.

IS THIS TRUE NOW?

"Medicine has advanced so far, that for the study of disease after the patient has died, we find institutions magnificently equipped, presided over by men of great experience and training; for persons suffering from the advanced stages of disease, we find great hospitals, with staffs of skilled physicians, surgeons and specialists. If we seek to find out 'What are the facilities offered for the detection and cure of disease in the stage when it has not damaged the tissues'? We discover that there is little consideration given to this aspect of the matter. It is indeed instructive to reflect, that, while men undergo a long and special training to enable them to recognize the appearance of the disease after the patient has died, and other men undergo equally careful training to enable them to recognize disease after it has damaged the tissues, few or no attempts are made to train men for the detection of disease when there is hope of a cure."—The Future of Medicine, Sir James McKenzie.

It is nearly a decade since these sentences were written. And now we are beginning to consider means of detecting disease while it may still be cured. The campaign for periodic health examinations points the way to early detection and recognition before any serious damage is done to the tissues.

MEDICAL POST-GRADUATE EDUCATION

An appropriation has been made by the Board of Regents of the University of Michigan for the establishment of post-graduate medical instruction. The Michigan State Medical Society has asked for extension work among the physicians of the state. A committee has been named by the Council of the Society to work out the details and to determine the nature of such extension work. The word extension is used advisedly for instruction for the present at least will be done largely extramurally. The one and two day clinic which has already found so much favor throughout the state will be continued. An effort will be made to get away as far as possible from the didactic lecture and to make the instruction practical.

A second feature, and this is somewhat an innovation, will be clinical and practical

instruction for periods of a week dealing with a single subject such as the management of the diabetic, or infant feeding, or the management of pernicious anemia. These courses will be limited to small groups who manifest sufficient interest in the particular subject to attend a short intensive course to be given at some of the larger clinical centers or at the medical department of the University. Details of this work will appear in a near future number of this Journal. Every effort will be made to insure that the work shall be timely and such that will meet the needs of those in active practice.

THE DIRECTORSHIP OF GRADUATE MEDICAL EDUCATION

The appointment of Dr. James D. Bruce to the position of director of graduate medical education is one that will be received with general favor by the medical profession of the State. Dr. Bruce's enthusiasm in regard to education especially in the matter of popularizing the advances of medicine is well known. For the past three years he has held the position of chief of the department of internal medicine at the University of Michigan. This experience combined with that of years of successful practice of both medicine and surgery go to make an ideal mental equipment for the position to which he has been assigned by the Board of Regents. Dr. Bruce combines the medical educator and the practical physician. He knows the medical profession from a quarter of a century's contact. His activity in the councils of the Michigan State Medical Society has been well and favorably recognized.

A big step forward has been made to meet the desire already expressed for the extension of facilities for medical education to every active practitioner in this State. What scientific medicine has to offer is being brought to our door.

The members of the Michigan State Medical Society and the Board of Regents as well as Dr. Bruce are to be congratulated on this appointment.

CAMPAIGN OF NATIONAL TUBERCULOSIS ASSOCIATION

The two diseases causing the greatest economic losses in the United States have been tuberculosis and hook-worm disease. Hook-worm is a disease cured by a simple treatment. Tuberculosis is primarily a disease of youth, and while the death rate has been recently reduced by 50 per

cent, still greater effort should be made to detect tuberculosis in its early stages. The nation wide campaign of the National Tuberculosis Association to be put on this spring, is an effort to get chest examinations made, so that tuberculosis hitherto unsuspected may be discovered. Thousands will present themselves for examination to their doctors within a few months. The responsibility of a careful, painstaking examination of those coming to their doctors is one which we must meet. Many incipient cases will come and this should stimulate us to give the best service we can to our people. Chest men tell us to be especially suspicious of a case with fever, or of those giving a history of loss of weight, or of strength, or of dyspepsia. In those cases examination should be repeated until a diagnosis of tuberculosis can be excluded.

H. E. Randall.

COMMON COLDS

Sir James McKenzie the famous heart specialist used to emphasize the importance of devoting the greatest attention to the initial stages of disease. He dwelt upon the importance of placing the most experienced physicians in the out-patient department rather than in the wards of the hospital. It was here the patient stood a greater chance of being helped by medical attention.

The importance of such advice is receiving recognition by the fact of an appropriation by The Chemical Foundation of \$195,000 to the Johns Hopkins University for investigation into the cause and for the possibility of finding a cure of colds. Of the systems of organs of the body, diseases of the respiratory organs come first and of the digestive tract second as a means of disablement. The reason is apparent. The other organs, cardiac, renal, glandular are affected only indirectly.

A calculation made by the Public Health service places colds at the head of a list of fifteen disabling conditions which cause absenteeism from business and industrial establishments.

Influenza is a close second. According to an estimate made by the insurance department of the United States Chamber of Commerce, the total annual loss to the people of the United States through illness is placed at two million dollars. A goodly portion of this is preventable sickness. Clinical research together with research in the realm of physiological chemistry have produced results more or less triumphant

in smallpox, tuberculosis, yellow fever, diphtheria, typhoid and diabetes. Why may we not expect important results from the Johns Hopkins staff of research workers during the five year period allotted to the investigation into the cause of colds which are very frequently the forerunners of grave complications too well known to us all?

The Manchester (England) Guardian does not feel over sanguine of the outcome of this piece of research, and the gift has inspired the Guardian's muse to express itself thus:

I knew a man, a learned man, a man of much
renown,
Who vowed that he would yet surprise the natives
of his town;
He tried to square the circle; and, I much regret
to say,
Announced his purpose publicly. So him they
put away.

I knew a man, another man of most inventive
vein,
Who got perpetual motion rather badly on the
brain;
With little weights and wheels and things he used
to sit and play;
The neighbors got to hear of it. And him they
put away.

I knew a man, another man of decent, steady
stock.
Who tried for weeks to add a pound of tea to
ten o'clock;
His calculations stretched for miles and made a
fine array;
He sent them to the House of Lords. So him
they put away.

One morning as these pretty men were sitting
in a row
Upon the wall that hedged them in they noticed
down below
Another man, a worried man, who muttered as
he went;
They asked him why his brow was sad and why
his back was bent.

He said, "I've offered forty thousand pounds of
honest gold
To him who finds a cure for what they call a
common cold."
Upon the wall they looked at him, and as one
man replied,
"We're very pleased to meet you, sir. Hi! com-
rade, come inside!"

OUR CONTRIBUTORS

Dr. Leonard F. C. Wendt has devoted his attention to the study of diabetes over a number of years. He has established a clinic, where the problem is studied in its various phases, including diet and education of patients. Dr. A. P. Biddle, first editor of this Journal and president of the Michigan State Medical Society (1917-18), has taken a large interest in the civic life of Detroit, having served eight years as a member of the board of education. He is now a member of the library commission. Dr. George Draper is

professor in the department of medicine, Columbia University, New York. He has developed a unique clinic which he calls his constitution clinic. Dr. C. W. Rutherford is associate in ophthalmology, Indiana School of Medicine, also editor of The Transactions of the Indiana Academy of Ophthalmology and Otolaryngology. Dr. D. S. Brachman is medical director of the Dubois Health Center of the Tuberculosis Society of Detroit and Wayne County. Dr. Rita B. Tower is a medical missionary in India under the control of the W. F. M. S. of the M. E. Church. The paper on the Early Diagnosis of Pulmonary Tuberculosis by Dr. Gerald B. Webb of Colorado Springs, is apropos of the campaign being put on by the Michigan Tuberculosis Association.

EDITORIAL NOTES

Dr. G. W. C. Kaye, superintendent of the department of physics of the National Physical Laboratory of England and one of the foremost authorities on X-ray physics, has called attention to the importance of ventilation of X-ray laboratories, to insure the health of radiologists and technicians. The workers in X-ray laboratories have learned by bitter experience the importance of protection from the harmful effects of the X-rays and radium rays as well as the dangers of high tension currents. In too many hospitals still are the X-ray departments housed in basements difficult to ventilate satisfactorily. Kaye claims that the gases generated by X-ray apparatus are to blame for deleterious effects on X-ray workers.



Dr. J. D. Bruce

Director of the newly organized Department of Post-Graduate Medicine of the University of Michigan and chairman of the committee on Post-Graduate Medicine of the Michigan State Medical Society.

There have been a number of articles in lay magazines on the high cost of sickness, in which not only hospitals but the remuneration of the attendant physician or surgeon come in for a certain amount of adverse criticism. There is no question but that illness is unfortunate from every viewpoint, economic as well as from that of personal suffering. The question of the physician's or surgeon's fee, however, is one we would not attempt to decide. In proportion to the amount of academic training, cost of the same and the exacting demands made upon numbers of the profession, it can scarcely be said that they are overpaid. The medical profession is not a wealthy calling compared with some other occupations, and with many physicians the utmost retrenchment is necessary when it comes to meeting present day demands for the education of a growing family. Medicine is a charitable profession whose members in the vast majority of cases can be trusted to determine the economic relation between physician and patient. No one else is so well equipped to pass upon the justice of his fee as he himself.

Man has been described as an animal that looks before and after. Carlyle revised this statement by advising that man had better look around a little. It is safe to presume that as we grow older we tend to devise philosophies for ourselves. Perhaps no one had a richer existence than the late Sir William Osler and certainly no one left so many inspirational gems of thought. The little poem which appears on the cover of this number of this Journal prefaces an address of Osler's on "A Way of Life" in which the writer emphasizes the necessity of disregarding the past which cannot be in any way affected by the present or on the other hand living too much for the future, or as he expresses it "Cultivate the habit of living in Day-tight compartments."

"Dear Doctor: This is to congratulate you on your appointment as Editor of the Michigan State Medical Journal. You must be a 'bear' for work, but if you are I suppose you cannot help it and my best wishes go with you regarding your success in this new ambitious and honorable undertaking." Alden Williams, Grand Rapids. Thanks to you Doctor and to a score of others who have either written or approached me verbally in a similar vein. This gives me the opportunity to say that this Journal is a co-operative affair and its success will depend upon how much the members use it as their forum, and to the extent to which they contribute any interesting experience in the way of unusual cases or clinical or surgical methods which they have found useful or interesting. The Journal will soon grow stale if too much dependence is placed upon the editor.

MARCH, TWENTY-FIVE YEARS AGO

(From the Journal of the Michigan State Medical Society)

Editor, Dr. H. P. Biddle:

Dr. Emil Amberg, member on the Committee of National Legislation, A. M. A., contributed an editorial on Osteopathy and the Law. There is noted forty-eight chartered County Societies in Michigan, representing sixty-five counties. Dr. George C. Hafford, Albion, Calhoun County, has a paper on Considerations of Some Cardiac Problems. This was discussed by Doctors O. S. Phelps, Battle Creek; Angus McLean, Detroit; A. W.

Crane, Kalamazoo. Dr. Herman Ostrander, Kalamazoo, contributed an article on the Nature and Treatment of Epilepsy. Infant Feeding and Milk Modification is the title of a paper by Loran Curtis, Paw Paw. The Wayne County Medical Society has 326 paid members, giving seven delegates to the State Society. Dr. James E. Davis contributes an article on Some Observations in the Use of the Obstetric Forceps. Dr. H. R. Varney submits a preliminary report of the first fifty cases treated by the X-rays.

DEATHS

THE LATE DR. S. E. NEIHARDT

Dr. S. E. Neihardt of South Boardman, Mich., died at his home January 27. He had suffered for some time from chronic myocarditis complicated with arteriosclerosis, but had been actively engaged in his practice up to a few hours of his death. Dr. Neihardt was born at West Trinity, Ohio, on February 14, 1863. He received his early education at Orland, Indiana, where his father's family moved in 1864. After a course at the Orland High school, he entered the medical department of the University of Michigan in 1884 and completed his medical studies at Wooster university, Ohio, graduating in 1886. Dr. Neihardt began practice at LaGrange, Indiana, shortly afterwards locating at South Boardman, Michigan, where he spent the remainder of his life. He was thrice married, having five children from each of the second and third marriages. He is survived by his wife and ten children, as well as two brothers, George W., of Indiana, and Jonas J. Neihardt of Fife Lake, and two sisters, Mrs. Crosby, California, and Mrs. Lyon of Wisconsin. The doctor was a member of the Tri-County Medical Society, the Michigan State Medical Society and the American Medical Association. He was a member of the Masonic fraternity and a number of other organizations as well. For six years he was a member of the board of control of the State Hospital of Traverse City. He was also a pensioner examiner for almost thirty-five years. Dr. Neihardt was widely esteemed as physician and citizen and his passing is a distinct loss to the community.

FAMILY PHYSICIAN AS EDUCATOR

"If we are to guide people in the ways of health, if the community guards the health of its mothers, its babies, its school children, its industrial workers, the family doctor must become an educationist and in part a health administrator. If he does not, his role will suffer progressive diminution, curtailed as it will be on the one hand by the wholetime health official, and on the other hand by the invading specialist. This will, in my judgment, be a disadvantage to the community. The family doctor should remain the foundation of medical service, but his outlook, functions and training need modification to meet changing needs. First must come his care of the sick, but beyond that he will have communal and educational duties."—Dawson in The Lancet.

OUR OPEN FORUM

Affording Opportunity for Personal Expression

To the Editor: I am in receipt of your note of February 1st and I am somewhat curiously inclined to wonder if the result of the debate had anything to do with your decision. Seriously speaking, however, I understand that your Journal is limited for space and I assure you a new arrangement has been made which is entirely satisfactory to me. The bureau which I have the honor to represent will publish this matter and broadcast it widely.

Harry Rimmer.

Editor of The Journal:

Having read the Press reports of the so-called debate on Evolution held under the auspices of the entertainment committee of the Wayne County Medical Society in the Auditorium of the Detroit City College on the evening of January 31, 1928, one would be led to believe that the Wayne County Medical Society had gone on record as opposed to the theory of organic evolution as one of the working principles of Biology.

As one of the auditors at the fiasco above referred to and as a member of the Wayne County Medical Society I desire to enter a protest to the idea that the debate was in any way a purely scientific discussion of organic evolution as a Biological principle, and furthermore that the "vote" was not an expression of the sentiment of our Medical Society.

The make up of the audience plainly indicated that the house had been "packed" for the occasion and in the preliminary vote the sentiments of the "packers" was well expressed and certainly the majority of the persons who stood up were not members of the Society and it was this same element which supplied the applause for the platitudes indulged in by the representative of the negative side of the argument during the discussion and again cast the deciding vote at the end.

To me it seems exceedingly unfortunate that our Society should be represented as having taken the position as expressed in the Press, when the audience in no way represented either the Society or Scientific thinkers of any sort, much less Biological thinkers.

I trust therefore, you will see fit to publish this letter in the hope that we may in some degree correct, among the medical profession at least, the false impression that the press reports have given in reporting the "entertainment."

C. F. McClintic

These communications refer to a debate on the subject of Evolution, which took place in the Auditorium of the Detroit City College on the night of January 31. The subject of the debate was, "Resolved that The Theory of Evolution is established by the science of Biology. The affirmative was maintained by Dr. W. A. Dorland, Chicago; the negative, by Mr. Harry Rimmer of Los Angeles. We had hoped to print the two main addresses, the affirmative and the negative, had each been of the length of the average paper

contributed to this Journal, since we believe the interests of scientific truth are not jeopardized by free discussion. The affirmative was represented in a paper which consumed a whole hour in the reading and the address of the negative was of equal length. Owing to this fact their publication here was clearly out of question. As Mr. Rimmer has intimated, the debate will be published in full and will doubtless be accessible to those interested. Our conclusion not to publish the addresses was not in the least influenced by the way the debate went, even had the decision been other than what it was.

Apropos of the second letter, it has been for years a custom with the Wayne County Medical Society to hold an entertainment, instead of the regular scientific session, on the fifth Tuesday, when there happens to be five Tuesdays in the month. The entertainment usually takes the nature of a smoker or vaudeville performance. No business can be legally transacted, nor can anything be done officially at these meetings which are set apart purely as entertainment. The entertainment on Tuesday evening, January 31st, took on the nature of a debate on the subject mentioned and the meeting was thrown open to the public; it was very largely attended by a non-medical audience. It is almost needless to say that the decision of the debate therefore did not commit the Medical Society either way as intimated in a morning paper headline.—Editor.

CONCERNING BOOKS

A borrowed book is like a guest in the house; it must be treated with punctiliousness, with a certain considerate formality. You must see that it sustains no damage; it must not suffer while under your roof. You cannot leave it carelessly, you cannot mark it, you cannot turn down the pages, you cannot use it familiarly. And then, some day, although this is seldom done, you really ought to return it.

But your own books belong to you; you treat them with that affectionate intimacy that annihilates formality. Books are for use, not for show; you should own no books that you are afraid to mark up, or afraid to place on the table, wide open and face down. A good reason for marking favorite passages in books is that this practice enables you to remember more easily the significant sayings, to refer to them quickly, and then in later years it is like visiting a forest where you once blazed a trail.—William Lyon Phelps.

One of the greatest factors contributing to individual aid and social improvement is a "creative discontent," a discontent with things as they are, and with the impulse to make them what they ought to be, to the end that men and women may realize in the development of their personalities the most and the best of life. In the process of making new worlds for old through kindling the divine spark of such a creative discontent, current periodicals in our libraries are a most important factor.—The Library Journal.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

The number of so-called "cold cures" is legion; of actual cures none. The nation's drug bill is five hundred million dollars, three-fifths of which is spent for patent medicines alone, mostly sold as cold remedies.

The Chemical Foundation has announced a gift of \$195,000 to Johns Hopkins University for a five year co-operative research into the cause of common colds aiming also at the discovery of a cure. This research fund is named in honor of Dr. John J. Abel, professor of pharmacology of the Johns Hopkins medical school.

An endowment of \$1,000,000 has been made by Albert D. Lasker and Mrs. Lasker for the establishment of a foundation, which will be known as the "Lasker Foundation for Medical Research," at the University of Chicago. The object of this Research Foundation is to study the causes, nature, prevention and cure of degenerative diseases. It is understood that the first efforts of the foundation will be concerned with cardio-renal diseases.

In recognition of his thirty-five years as an outstanding teacher in the medical school of the University of Michigan and his international reputation as a pathologist, Dr. Aldred S. Warthin has been the recipient of an honor from his colleagues and former students, in the form of a volume entitled "Contributions to Medical Science." This book of 715 pages includes contributions from sixty-four authors, representing his early colleagues and including one or more representatives from each of his thirty-five successive classes.—Science.

The following Michigan physicians attended a three-day otolaryngological clinic at Rochester, Minnesota the week beginning January 23rd: C. W. Ellis, Lansing; H. O. Westervelt, Benton Harbor; G. A. Winter, and W. A. McGarvey, Jackson; R. J. Coyle, Windsor; Ralph G. Ferris, Birmingham; Charles A. Baker, Bay City; B. T. Larson, Pontiac; Wilfred Haughey, Battle Creek; P. T. Grand, Grand Rapids; William Fowler, Ray Connor, Voss Harrell, E. V. Joinville, William A. Defnet, D. A. Cohoe, Lee E. Grant, F. L. Ryerson, R. S. Goux, W. J. Voorheis, William S. Summer and A. O. Brown, Detroit.

Dr. F. C. Warnshuis, secretary of the Michigan State Medical Society, and business manager of the Journal, and Miss Hellen Todt, daughter of Rev. and Mrs. J. H. Todt, of Manistee, Michigan, were married on Tuesday, February 7. The ceremony was performed by the bride's father in the presence of the immediate families, relatives and a few intimate friends. Following the wedding breakfast the bridal couple left for a trip to Florida and Cuba. They will return to Grand Rapids about March 1st. Dr. and Mrs. Warnshuis have the sincere congratulations of the doctor's many friends in the Society and best wishes for a long and happy wedded life.

According to Science Service the general death rate of the industrial population of the United States and Canada for 1927 will probably be the lowest ever reported, according to figures already available from the records of the Metropolitan Life Insurance Company. The chief factor in bringing about this decrease is the drop in the influenza death rate to about half that of 1926, with an accompanying decline in pneumonia mortality. Deaths from tuberculosis probably will reach a new low level in 1927, it is stated, attaining a point that would have been regarded as nothing less than visionary as short a time as ten years ago. Whereas the rate was 224.6 deaths for every 100,000 of the company's policyholders in 1911, the indications are that for 1927 it will not exceed 90 per 100,000.

As this Journal goes to print, comes the announcement of important promotions in the faculty of the Medical Department of the University of Michigan. Dr. F. A. Collier, from the position of associate professor of surgery, has been made professor of surgery, with Dr. Hugh Cabot as Dean of the Medical School and head of the department of surgery. Dr. E. C. Badgley was promoted from assistant to associate professor of surgery and Dr. J. M. Pierce was made assistant professor of obstetrics and gynecology. Along with the same announcement comes the news that the board accepted two gifts of the Fellowship Corporation of Battle Creek, one of which is for \$20,000 to be paid in instalments of \$1,500.00 quarterly, and to be used for study in problems of metabolism. The second is a grant of \$2,500.00 for investigation of bran as an article of diet. Work in connection with these grants is to be carried on by Professor L. H. Newburgh.

PROGRAM, NORTHERN TRI-STATE MEDICAL ASSOCIATION, APRIL 10, 1928

(Fifty-fifth Annual Meeting, Auditorium Detroit College of Medicine and Surgery, Antoine and Gratiot avenues, Detroit, Michigan.)

Morning Session—8:30 a. m.

1. Clinical — Pathologic Conference — Doctors Edward Spalding, Douglas Donald and Jas. E. Davis, Staff Receiving Hospital, Detroit, Michigan.

2. UROLOGIC SYMPOSIUM—

(a) Dr. Henry Oliver Mertz, Professor Urology, University of Indiana, Indianapolis, Indiana. Urologic Dystrophy.

(b) Summary of Pathology, Function and Vascular Changes in Experimental Nephritis—Doctors Frank Wilbur Hartman and Howard P. Doub, Henry Ford Hospital, Detroit, Michigan. This embodies the work done by Hartman and Doub which won the gold medal for experimental work at the 1927 meeting of the A. M. A.

(c) The Correlated Pathology of the Kidney—Dr. James E. Davis, Professor of Pathology, Detroit College of Medicine and Surgery, Detroit, Mich. Discussions—Dr. C. C. Sturgis, Professor of Medicine, Ann Arbor, Mich.; Dr. Geo. W. Kim-

ball, Laporte, Ind.; Dr. Plinn Morse, Pathologist to Harper Hospital, Detroit, Mich.

3. Recent Advances in the Treatment of Pernicious Anemia—Dr. C. C. Sturgis, Director of the Simpson Memorial Institute for the Study of Anemia, (University of Michigan), Ann Arbor. Discussants—Doctors Wm. H. Marshall, Flint, Mich.; Chester W. Wagnor, Toledo, Ohio.

12:45 P. M.

Luncheon, Receiving Hospital, courtesy Welfare Commission, City of Detroit.

1:45 P. M.

Biologic Film—Rockefeller Institute. How Vaccines and Sera are made.

Afternoon Session—2:00 P. M.

1. A Demonstration of the Physiological Effect of the High Frequency Current (Diathermy)—Dr. W. H. McCracken, Dean and Professor Pharmacology, Detroit College of Medicine and Surgery, Detroit, Mich. Question box—General discussion.

2. Diphtheria Toxoid as a Substitute for, and an Advance Upon, Diphtheria Toxin Anti-Toxin—Dr. J. G. FitzGerald of the Royal Connaught Laboratories, Toronto University, Toronto, Ont. Discussants—Dr. Guy L. Kiefer, Commissioner of Health for Michigan, Lansing, Mich.; Dr. W. W. Beauchamp, Lima, Ohio.

3. Infectious Eczematoid Dermatitis (Tina) Clinically Illustrated—Doctors Andrew P. Biddle, President of American Institute of Dermatology, and R. C. Jamieson, Director of Dermatologic Department, Receiving Hospital, Detroit, Mich. Discussants—Doctors Henry S. Bartholomew, President Dermatologic Society, Lansing,

Mich.; Howard J. Parkhurst, Ex-President Dermatologic Society, Toledo, Ohio.

4. Bronchiectasis, Pulmonary Abscess and Tuberculosis—John Alexander, M. D., Assistant Professor of Surgery, University of Michigan, Ann Arbor, Mich.

Empyema—Frederick A. Collier, Professor of Surgery, University of Michigan, Ann Arbor, Mich. Discussants—E. J. O'Brien, Detroit, Mich.; Wm. A. Hudson, Detroit, Mich.

Evening Session—6:30 P. M.

Dinner—Statler Hotel Ballroom. Tickets, \$2.50.
8:30 P. M.

Joint Meeting Northern Tri-State Medical Association and Wayne County Medical Society—Statler hotel ballroom.

Address—Dr. Elliott C. Cutler, Professor of Surgery, Western Reserve Medical School, Cleveland, Ohio. (Subject to be announced).

Adequate arrangements have been made for the entertainment of the ladies of the Society. The Tourist Bureau will furnish guides for shopping and tours. Invitations have been received from the Ford Airport for a visit to that fascinating place.

The Woman's City Club of Detroit—the largest woman's club in the world—has extended the privileges of this wonderful club to the ladies for the meeting. This club is situated just two short blocks from Hotel headquarters at the Hotel Statler, and is well worthy of a visit.

Officers—Doctors Wm. M. Donald, President, Detroit, Mich.; W. W. Beauchamp, Vice President, Lima, Ohio; Morris Gillette, Secretary, Toledo, Ohio; Robt. Hoffman, Treasurer, South Bend, Ind.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

Under the plan adopted by the Council and imparted in the Secretary's annual report published in the February issue of The Journal your State Society is entering into a new sphere of organizational activity. The urge is felt to attain greater ends and achieve more far reaching results. We cannot well remain content by routinely pursuing the program that has reflected our scope of activity in a limited degree. We are conscious of the fact that much remains that may well be included in our Society's program whereby we may enhance membership value, contribute to our members' welfare and at the same time render public service. We are setting out upon such a broadened policy and plan.

We therefore urge that County Societies, officers and individual members remain informed by diligently reading this depart-

ment of The Journal. Through these pages we purpose keeping you informed as to all Society activities and to report the work done by our County Units.

We reiterate again the one basic principle of organized medicine: In all matters pertaining to organizational activities, medical practice, policies, legislation, public relations, member's interests, in fact everything related to the practice of medicine in any County, the County Medical Society is the one dominating and governing authority. In all state matters the State Medical Society is the official, recognized authority. In all national affairs the American Medical Association is the parent national authority and guiding body. The County, State and American Medical Societies and Association constitute our official governing bodies and as

such receive our first allegiance and support. There cannot be any other supreme governing or directing powers or spokesman, though justification, from a scientific standpoint, does exist for the organization of other special national and regional medical organizations. These latter societies should, however, cause their influences and policies to ever conform to the plans and policies of the American Medical Association and its component units. Such a precedent ever dominates our State Society and governs our official action.

By reason of that precedent the following letter was sent to every County Society by direction of the Council:

To the Secretaries of County Societies,

Dear Sir:

At a recent meeting of the Council, held in Detroit on January 11, discussion was directed towards the activities that were being evidenced in societies by representatives of the Gorgas Memorial Foundation. It has become quite evident that this Foundation, through its representatives, has been appealing to county organizations for assistance in the perpetuation of this Foundation. Further, that they have sought opportunities to present their plans to our several County Medical Societies and solicit subscriptions. In addition it has been noted that some of the proposals materially conflict with the plans, policies and scope of activity of our State Medical Society and its component units, the County Medical Societies.

In view of the above and after mature discussion, the State Secretary was directed to address the following statement to our County Societies and request them to be governed accordingly.

"That the Michigan State Medical Society holds for the State of Michigan the same position and the same attitude that was adopted by the Board of Trustees and the House of Delegates of the American Medical Association in regard to the Gorgas Memorial. This attitude is expressed in the official report of the Board of Trustees of the American Medical Association as follows:

The Board of Trustees of this Association has already gone on record as being directly opposed to the solicitation of funds for a vast scheme of public health education by a separately constituted organization, such as the Gorgas Memorial, which unnecessarily duplicates and usurps work already being done by the established bureaus and publications of the American Medical Association and by other organizations such as are included in the National Health Council. Such a movement would make more difficult the task of the American Medical Association to insure for the public publicity for scientific medicine that is well controlled and safe. The great dangers of uncontrolled publicity for medical affairs have been emphasized to this Board."

Our State Organization in its House of Delegates has gone on record in regard to a plan to be observed by our County Societies and members in the matter of Periodic Physical Examination.

Representatives of the Gorgas Memorial are suggesting a plan whereby this examination shall be conducted at hospitals and clinic centers in place of at the office of individual's family physician. We believe this detrimental and not to the interest of our members, and therefore seek to discourage the publicity and institution of any movement that tends to herd people into hospitals and clinic centers for examinations that may be best conducted by the regular family physician.

For these reasons, therefore, it is recommended that the competent units of the Michigan State Medical Society refrain from according the opportunity to the Gorgas Memorial representatives of utilizing the County Society as an agent for the furtherance of their proposed activities.

Yours very truly,

Secretary.

At intervals, and from varied sources, the report reaches us that The Council, officers and certain committees are favorable to and even foster movements that lean toward so-called state medicine. Just what occasions such statements we have never been able to ascertain. However, that there may be no misunderstanding, we renew the pronouncement that such a conclusion is in error. Our Society, its executive groups and your Secretary are emphatically opposed to the institution of any and every practice that proposes to provide state controlled medical services for the people in other than the treatment and prevention of contagious diseases and the treatment of dependent poor or insane. Your officers have ever been alert to oppose vigorously and persistently the institution of state medicine. Your Secretary personally is very much opposed to the operation of so-called infant and school clinics, where children of parents able to secure medical advice and services are accorded free medical care for which they are able to pay. We believe in imparting public instruction but after having so instructed we feel that the securance of medical care is a personal responsibility. We repeat—we are unalterably opposed to state medicine.

EATON COUNTY

The officers elected for the coming year are the same as those for last year with the exception of the secretary and treasurer. Dr. Carleton Dean of Eaton Rapids was elected in the place of Dr. H. J. Prall for the office of secretary and treasurer.

Carleton Dean, Secretary.

MONROE COUNTY

Monroe County Medical Society met February 16, 1928, at the Park hotel, Monroe. Dinner was served at 6:30 p. m. No important business was transacted.

Dr. Paul S. Barker of University Hospital,

Ann Arbor, gave an excellent address on "The Heart in Thyrotoxicosis."

Florence Ames, Secretary.

TUSCOLA COUNTY

I am enclosing report for the month of January, 1928, together with check for \$110 for dues collected.

On January 19 the County Society held a meeting which was largely attended. Dr. A. E. Leitch and Dr. Clarence Toshach, of Saginaw, read very interesting papers. Dr. Leitch's subject was "Goiter", and Dr. Toshach's was "Post Natal Care of Mother".

W. A. Crooks, Secretary.

CLARE COUNTY

The January meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Park House, St. Louis, January 26.

Sixteen had supper together at 6:30.

Dr. B. C. Hall read the report of the Committee on a Fee Bill, this brought out a prolonged discussion which later had to be postponed to a future meeting to give time to Dr. M. F. Bronstetter who talked from notes on the "Differential Diagnosis of Surgical Condition of the Abdomen." This was discussed by Dr. Wm. L. Harrigan, Dr. T. J. Carney, and Dr. B. C. Hall.

Dr. Homer H. Stryker of Alma was elected to membership.

E. M. Highfield, Secretary.

BRANCH COUNTY

The Branch County Medical Society met for its Annual Meeting February 3, 1928, at Coldwater.

The program was furnished by home talent consisting of a paper on "The Doctor in Legislation or Medical Legislation."

Dr. E. E. Hancock, our retiring secretary-treasurer, formerly of Union City now of Battle Creek, gave a fine report of the Race Betterment Conference at Battle Creek and of the Highland Park Clinics.

Following the report of the Secretary-Treasurer Dr. Thomas B. Marsden, resident physician of the State Public School at Coldwater was received in membership.

The Society then elected the following officers for the ensuing year. President, Dr. S. E. Far, Quincy; Vice-President, Dr. W. A. Griffith, Coldwater; Secretary-Treasurer, Dr. R. W. McLain, Quincy; Delegate to the State Meeting, Dr. W. A. Griffith, Coldwater; Alternate, Dr. R. L. Wade, Coldwater; Medico-Legal Committee, Dr. Schultz, Coldwater.

R. W. McLain, Secretary.

ALPENA COUNTY

The February meeting of the Alpena Medical Society was held Friday February 10 at the Temple Cafeteria. After a delightful dinner at six the program followed.

Dr. D. A. Cameraon gave an illustrated lecture on Jenner and Smallpox. The early trials of this earnest investigator were graphically described.

Dr. E. L. Foley presented a clinical case of pernicious anaemia. The improvement under the administration of liver had been rapid.

Dr. S. T. Bell presented a clinical case of hypothyroidism. The diagnosis had been made some two years previous, and the improvement

under thyroid medication was marked. Attention was called to the necessity of consideration of this disease in suspected nephritis cases and in cases showing marked changes in the skin and hair.

Dr. Carl Weller of the University who was a guest of the society gave some interesting observations on the Interpretation of the Wassermann reaction. His remarks showed the necessity of checking the reactions with the clinical findings.

C. M. Williams, Secretary.

NEWAYGO COUNTY

The annual meeting of the Newaygo County Medical Society was called at the Kimbark Inn, at Fremont, Mich.

After luncheon the meeting was called to order by the President, Dr. Drummond. The minutes of the last regular meeting were read and approved.

Dr. B. F. Black of Holton was then unanimously voted to membership in the Society. A communication from Dr. LeFevre, district councillor, relative to time and place for holding the next P. G. Medical Conference, was read and a motion was made by Dr. Geerling, supported by Dr. N. DeHaas that the Secretary be instructed to notify Dr. LeFevre that the Society would be pleased to have the next P. G. Conference at Fremont, about the first week in June of 1928, and the motion was carried.

The Society then proceeded to the election of officers for the ensuing year with the following results:

President, Dr. H. R. Moore, Newaygo; Vice-President, Dr. J. C. Branch, White Cloud; Secretary-Treasurer, W. H. Barnum, Fremont; Committee on Medical Defense, Dr. N. DeHaas, Fremont; Delegate to Michigan State Medical Society, Dr. P. Drummond, Grant; Alternate, Dr. B. F. Black, Holton.

Members present, nine.

W. H. Barnum, Secretary.

LENAWEE COUNTY

The January meeting was held in Adrian at the Adrian Club on the evening of Thursday the 19th. Dr. Esli T. Morden of Adrian was host to the Society.

Dinner was served in the dining room of the club at 6:30 p. m. There were 35 members and guests present.

The scientific program was given by Doctors Isaacs and Friedgood of the Simpson Memorial Institute of Ann Arbor. Dr. Isaacs told of the founding of the Institute and its aims and purpose. Dr. Friedgood gave an excellent paper on the "Diagnosis and Treatment of Pernicious Anemia," with of course special emphasis on the exact methods in use at the Simpson Institute. He gave excellent word pictures of a number of cases recently treated and the results obtained. It would be a fine thing if every member of the State Society could hear these two men talk on the subject of "Pernicious Anemia."

The annual election of officers was held with the officers elected, as follows:

President, H. H. Hammel, Tecumseh; Vice President, H. H. Heffron, Adrian; Secretary-Treasurer, R. G. B. Marsh, Tecumseh.

The final part of the program was given by Dr. Hammel. He told the story of his hunting trip in western Alberta, Canada after big game.

He illustrated his story with two hundred feet of moving pictures. He was in the hunting country five weeks and brought back fine heads of mountain sheep, goat, caribou, moose and silver tip grizzly bear and also a black bear. His greatest thrill was obtained when he was taking moving pictures of a bull caribou. This picture is truly a masterpiece, and can only be appreciated when seen. It is a picture that might never again be duplicated.

Our host, Dr. Esli T. Morden, is to be congratulated for making possible this fine meeting. The Society is grateful to him.

The meeting in March will be held on the evening of the 15th. Dr. Angus McLean will be the speaker.

R. G. B. Marsh, Secretary.

BERRIEN COUNTY

The January meeting of the Berrien County Medical Society was held in two sections. The southern part of the County Society met at Niles on Monday, the 23rd, and the north end at Benton Harbor on Thursday, the 26th.

Both were business meetings for the purpose of outlining policies for the coming year and for discussion of fees and collection.

A committee, consisting of Dr. Sowers of Benton Harbor, Dr. Rutz of Niles, Dr. Snowden of Buchanan, were appointed to work out a universal fee schedule for industrial work, as well as private practice.

It was decided to publish a delinquent debtors' list, available to all members of the Society, the purpose of this being to stop the nuisance of "progressive doctoring", viz., the habit of calling one physician until a bill is run up, and then calling another and cursing the first as a rotten physician. Patients on this list will be notified that they will be refused further credit by physicians in the Society. Further medical services they may need must be for cash until their old accounts are cleared. It is thought this scheme will also promote a more friendly and co-operative action among the members of the Society and also save a lot of unnecessary calls that are not remunerative. Care will be taken that no deserving people are on this list, or those in strained circumstances.

It is felt by members of this Society that the physicians in general practice are unduly imposed on. All of us have our charity families and people whom we are glad to tide over, but the faked emergency calls and "unable to get their doctor (because they have not paid their bill) calls" have become so much of a nuisance that it was felt that some action should be taken to combat this. This is an experiment and if successful, we will be glad to pass the information on.

W. C. Ellet, Secretary.

TRI-COUNTY

Dr. Don Griswold, Deputy State Health Commissioner, appeared before the local Rotary Club at their Noon-Day Luncheon on January 31, 1928 and gave a very interesting talk on County Health Units. Was also guest of the Tri-County Medical Society at a 6:30 dinner at Mercy Hospital, where he gave a more detailed account of the program of the State Health Department in organizing County Health Units. Our Society voted unanimously for the plan. All the preliminary work with the various health organizations has

been done and the doctor is to appear before the Board of Supervisors at their April Session. Wexford County is very favorably situated for such a unit, as they have a Health Program in force now with a budget of \$8,500, so with the State and Federal aid could go on the County Unit Plan with no extra expense. The local Board of Supervisors were very favorably impressed with the plan as suggested to them at the October Session, so will no doubt adopt the plan when presented to them by the State Department.

Mercy Hospital held its 20th anniversary January 21 with a 11 o'clock Mass, following by a noon-day luncheon, with the local staff and board attending. Appropriate remarks were made by different members of the Staff and Board and Sister Lagora.

Dr. David Ralston, who is an Honorary Member of the State Society left for New York to spend the winter with his daughters.

Dr. S. E. Neihardt, of South Boardman, a member of our local and State Society died very suddenly January 27, 1928. I am enclosing a Memorium, by Dr. Hill of Fife Lake, also a historical sketch and obituary of his life.

Mercy Hospital are having some very elaborate additions made to their building, which will add very materially to its service in this part of the state. Our Society turned over the proceeds of a Liberty Bond for \$500 and its accumulations for their part in the improvements.

S. C. Moore, Secretary.

WAYNE COUNTY

PROGRAM FOR MARCH, 1928

March 6—General Meeting. Symposium on "Malignancy of the Gastro-intestinal Tract."

Clinical Aspects—

Dr. C. Emerson Vreeland.

Roentgenology—

Lawrence Reynolds, M. D.

Surgical Treatment—

Donald C. Balfour, M. D., Mayo Clinic

March 13—Medical Section. "Clinical Value of the Electrocardiograph."

John L. Chester, M. D.

Discussants—W. J. Wilson, M. D.

A. J. Jennings, M. D.

E. C. Spalding, M. D.

R. L. Novy, M. D.

Norman E. Clarke, M. D.

March 20—General Meeting.

(1) "Report of a Case of Tularemia."

E. C. VanSyckle, M. D., Detroit.

(2) "Management of Emergency Cases of Diphtheria."

J. E. Gordon, M. D., Director

Contagious Disease Division,

Herman Kiefer Hospital.

Discussion opened by B. Bernbaum, M. D.

March 27—Surgical Section. "Symposium on Poliomyelitis."

(1) Etiology—Robert Funston, M. D.

(2) Pathology—Angus Goetz, M. D.

(3) Early Treatment—David J. Levy, M. D.

(4) Later Treatment—A. D. LaFerte, M. D.

Discussion opened by William E. Blodgett, M. D.

PROGRAM OF THE PRACTITIONER'S CLUB OF WAYNE COUNTY MEDICAL SOCIETY

- March 2—"Physical Signs in Diagnosis of Incipient Pulmonary Tuberculosis."
D. S. Brachman, M. D.
- March 9—"Evaluation of Heart Murmurs."
John Chester, M. D.
- March 16—"Diagnosis of Anemias."
Plinn Morse, M. D.
- March 23—"Treatment of Anemias."
John Watkins, M. D.

OAKLAND COUNTY

A meeting of the Oakland County Medical Society was held at 6:30 p. m., Thursday evening, February 16th, at the Board of Commerce, Pontiac. Dinner a la carte was served.

Judge Glenn C. Gillespie addressed the meeting on "Hunting in Northern Michigan," illustrated with motion pictures.

Members were urged to bring their friends.

The following are the newly elected members.

Doctors E. A. Christie, Helen Cannon, Goldie B. Corneliuson, Dwight M. Ernest, Harold A. St. John, E. Kyle Simpson, Pontiac; Carl Dahlgren, Keego Harbor; R. S. Grimmett, Rochester; T. W. K. Hume, Auburn Heights; Harold F. Stahl, Oxford; Ernest W. Bauer, Hazel Park, Fred Townsend Reid, Clawson; Harold Roehm, Birmingham.

* * *

AN EXCERPT FROM THE PRINCIPLES OF MEDICAL ETHICS—ADVERTISING

Sec. 4.—Solicitation of patients by circulars or advertisements, or by personal communication or interviews, not warranted by personal relation, is unprofessional. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not per se improper. As implied, it is unprofessional to disregard local customs or offend recognized ideals in publishing or circulating such cards.

It is unprofitable to promise radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of disease; or to employ any methods to gain the attention of the public for the purpose of obtaining patients.

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HEALTH CERTIFICATES FOR CHAUFFEUR'S LICENSE

We are in receipt of the following information from Dr. Guy L. Keifer, State Commissioner. "Any applicant for a chauffeur's license whose laboratory finding is a positive Kahn test must, under the law, be refused a license. The license will necessarily be withheld until such time as the blood shows a negative reaction.

TO DELINQUENT MEMBERS

The treasurer reports that there are 92 members in good standing for the year 1928. This leaves a baker's dozen outside the fold. You cannot afford to be without membership in your County and State Societies. The State Journal is one of the outstanding publications of its kind in this country. The services of the Defense League are available when needed.

Send your check to Dr. I. C. Prevette, treasurer, and help to bring the membership to 100 per cent by March 1st.

C. A. Neafie, Secretary.

SAINT CLAIR COUNTY

Regular meeting of Saint Clair County Medical Society held at the Hotel Harrington, Port Huron, Mich., Thursday, February 2, 1928. Supper was served to ten members at 6:30 p. m. and the meeting was called to order by the President, Dr. Reginald Smith at 7:45 p. m. with the following members present: Doctors Smith, Lane, Thomas, Morris, B. S. Brush, Waters, Burley, Vroman, Windham, Kesi, McKenzie, Attridge, Clancy, Meredith, LaRue, Callery, Treadgold, Fraser, Cooper and Wellman. Dr. L. R. Gaddis, Health Officer of Port Huron was present as a visitor.

Minutes of the preceding meeting were read and approved. Communications were read as follows: From Mrs. Belle Moore Waters of Nekoosa, Wis., thanking the Society for flowers sent to the funeral of Dr. Hugh Waters; from Dr. E. E. Lewis thanking the Society for electing him to honorary membership; also a letter from the State Society advising that the activities of the Gorgas Memorial Foundation in Michigan did not meet with approval and suggesting that the component county organizations refrain from cooperating with this organization for the furtherance of their activities; also a letter from Wayne County Society transmitting the text of a resolution relative to Act 306 Public Acts of 1927 the so-called County Health Department Act. From the resolution it is apparent that Wayne County Society do not approve of this Act; a letter with enclosures relative to the same subject from Dr. Guy L. Kiefer, State Health Commissioner in which he defends himself and the Act in question and asked the support of Saint Clair County Society and a letter from the Michigan Tuberculosis Association requesting a list of membership for use in mailing notices for the next State Clinic to be held in Port Huron.

A motion was made and seconded to reconsider motion authorizing the Secretary to write Dr. Franklin Martin and removing same from minutes of the Society, this was carried.

Dr. George Waters thanked the Society for flowers sent to the funeral of his brother, Dr. Hugh Waters and for the many expressions of sympathy he received at the time from his friends in the profession.

The Secretary read the complete correspondence and enclosures received from Dr. Guy L. Kiefer relative to Public Act 306 and a thorough discussion followed. A motion was made, supported and carried adopting a resolution similar to that adopted by Wayne County Society relative to this act. The resolution follows:

WHEREAS: Act 306 of the Public Acts of 1927 which provides for full time County Health Departments is indefinite in the limitation of its authority and of doubtful necessity at the present time, and, used in conjunction with existing state laws, could be

developed into an expensive and unjustifiable health program for the State of Michigan.

BE IT RESOLVED that the Health Program as outlined by said Act does not meet the approval of the Saint Clair County Medical Society.

Motion made, supported and carried to the effect that the Society act in accordance with the suggestions of the State Society relative to the program of the Gorgas Memorial Foundation and its activities.

Motion made, supported and carried to have the Secretary read the articles relative to medical subjects now appearing in the Detroit Saturday Night at the next meeting of the Society.

The Society then went into executive session.

Dr. W. D. Lane read a very interesting paper on "X-ray Findings in Duodenal Ulcer" with lantern slides. Discussion on Doctors McKenzie, Meredith, Callery, Attridge and Thomas. Meeting adjourned at 11:30 p. m.

George M. Kesl, Secretary.

Regular meeting of Saint Clair County Medical Society was held at Hotel Harrington, Port Huron, Michigan, Thursday, February 16, 1928.

Supper was served at 6 p. m. to fourteen members and three visitors. The meeting was called to order by President Reginald Smith at 7:45 p. m., with the following members present: Doctors Smith, Morris, H. O. Brush, Meredith, Waters, Lane, McColl, Thomas, Burley, Sites, Vroman, Callery, Waltz, Bowden, Kesl, Cooper, Clancy, B. E. Brush, Windham, McKenzie, Attridge, LaRue, Wellman and Derck. Visitors: Dr. E. W. Caster of Yale, Dr. P. E. Martin of Imlay City, Dr. J. C. Webster of Marlette, and Dr. Gertrude Manion of the Women's Benefit Association.

Minutes of the previous meeting were read and approved. Chairman Attridge of the Clinic Committee made a preliminary report which was placed on file.

Dr. E. C. Sites reviewed a series of over five hundred cases of disease of the gall bladder covering the symptomatology, diagnosis, surgical treatment, complications and post-operative history. Dr. Sites enumerated certain symptoms with the percentage of incidence of each as follows: eructation of flatus and epigastric distension 52 per cent, nausea 39 per cent, pain or distress in epigastrium 20 per cent, constipation 20 per cent, pain in upper right quadrant 23 per cent, same referred to right shoulder and back 22 per cent, icterus 20 per cent, vomiting 18 per cent and general abdominal pain 9 per cent. Regarding diagnosis, Dr. Sites said that with the X-ray 30 per cent gave positive evidence of gall bladder disease, 19 per cent gave suggestive signs and 42 per cent were negative. With the Graham-Cole technique all but 10 per cent gave either positive or suggestive findings.

Dr. E. W. Meredith followed with a paper covering the present day progress of diagnostic procedures in disease of the upper right quadrant of the abdomen. During the talk, Dr. Meredith told of a visit he paid to the Mayo Clinic and of experimental work done in the study of gall bladder function, by the use of dyes, in pregnant dogs. Concluding his part of the symposium, Dr. Meredith showed several sets of radiographs showing changes in size and shape of the gall bladder, and the presence of gall stones, before and after ingestion of a fat meal.

Dr. B. E. Brush discussed the etiology, symp-

tomatology and surgical treatment of disease of the gall bladder, in the concluding paper of the symposium. He stressed the fact that the etiology was in doubt and that the two principal theories were the infectious and the metabolic. He stated that he was inclined toward the metabolic theory because he thought something more than infection was needed to produce gallstones, and in support reviewed a series of one hundred cases in Starr Judds' Clinic which rather strongly supported this metabolic theory. The classical symptom complex of right upper quadrant pain referred to the shoulder and back, when present, often justified an operation, according to Dr. Brush. However, he thought that every possible aid should be obtained from the laboratory in cases where rather indefinite symptoms existed. Regarding treatment, the speaker seemed to favor removal of the gall bladder unless there was some definite reason to the contrary. "The Mayos," said Dr. Brush, "remove the gall bladder in 95 per cent of the cases." The counter-indications being jaundice, stones in common duct, or any condition which might indicate a stricture of the same.

The discussion was opened by Dr. Attridge, who leans toward the infectious theory as the cause of gallstones. Dr. C. F. Thomas stated that the mortality was twice as high in cholecystectomy as in drainage. Dr. E. W. Caster feels that, if possible, the gall bladder should not be removed.

Dr. W. D. Lane arose to state that the most objectionable feature of the present technique was toxicity of the dye used and that in his opinion the profession had a long way to go before reaching a safe procedure. Dr. A. J. McKenzie stated that in the Mayo Yearbook of 1926 there was a very comprehensive symposium on diseases of the gall bladder and covered the subject up to the present day. He said he did not believe typhoid a cause. Pregnancy predisposes in his opinion. The triad of findings most reliable in bile obtained by drainage of the gall bladder are turbidity, pus and cholesterolin crystals; if these are present you are dealing with disease of the biliary tract. "Belching and bloating," said Dr. McKenzie, "are not reliable signs of gall bladder disease, because they occur in so many other conditions." In the silent type of gallstones this symptom does occur and is of some importance. Dr. McKenzie thinks that the Graham-Cole and Einhorn tests are reliable and that the Vandenberg test helps to differentiate pancreatitis from cancer at the head of the pancreas. Dr. McKenzie reported a case in his own practice where a stone was found lodged in the ampula of Vater which he discovered after some search and removed through a duodenal incision. Calcium Chlorid intravenously will obviate hemorrhage in cases with jaundice and several quarts daily of glucose solution by mouth previous to operation will prevent acidosis. The gall bladder should not be removed in cases with icterus. Dr. Charles Mayo has recently advanced a theory that sugar consumption may be a factor in producing disease of the biliary tract through overwork of the liver, said Dr. McKenzie in concluding his remarks.

Dr. B. E. Brush closed the symposium by reporting two very interesting facts recently found in the literature, that a surgeon in India who had performed many hundreds of laparotomies had failed to find a single case of gallstones and that similar report was had from a hospital, with colored patients only, in Georgia. Dr. Brush be-

lieves that a too great consumption of sugar and lack of natural foods to be factors in gall bladder disease. Dr. E. W. Meredith, in closing, spoke of a new dye now in use at Mayo Clinic which did not cause nausea or vomiting. The preparation, however, was not available commercially, as yet. He also spoke of the medical treatment of gall bladder disease, by drainage once weekly and by use of Urotropin. Dr. E. C. Sites concluded the symposium by stating that in the series reported by him early in the evening

showed that 70 per cent of female cases gave history of pregnancy and that this would bear out the statement made by Dr. McKenzie in his discussion. Dr. Sites thought that surgeons should always explore the common duct and the head of the pancreas. This would frequently lead to discovery of other pathology during operations upon the gall bladder.

Meeting adjourned at 10:35 p. m.

George M. Kesl, Sec'y.-Treas.

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

PERCIVAL'S MEDICAL ETHICS—Edited by Chauncey D. Leake, associate Professor of Pharmacology, University of Wisconsin. Price \$3.00. The Williams and Wilkins Company, Baltimore, U.S.A.

Thomas Percival was born in 1740 in Lancashire, England. The degree M. D. was conferred upon him at Leyden in 1765. During this year he was made Fellow of the Royal Society, along with John Morgan, who is considered the Founder of Medical Education in United States. Percival was a friend of Benjamin Franklin and was in close touch with such leaders in medicine as John Hunter. Of a number of works written by him he is known chiefly for his "Medical Ethics." The present contains an unabridged Percival with valuable notes and references; and introductory essay by the author dealing with development of medical ethics and the significance of Percival's work; the Hippocratic Oath; the codes of the American Medical Association beginning with that of 1847 and including that of 1912 revised to date. The little work is highly entertaining reading.

HORMONES AND STRUCTURAL DEVELOPMENT — Charles R. Stockard; Beaumont Foundation Lectures, Series Six. 74 pages, Williams and Wilkins—1927. Price \$1.50.

In a most interesting way the author of this little book has sketched a more or less generalized account of those factors upon which depends the normal or abnormal development of an individual. In the growth and development of an embryo from the egg to an adult, the distinct sequence of changes resulting in formation and differentiation of tissues and organs depends upon a growth dominance of one part over another. In illustration it might be mentioned that the pancreas does not develop till the anlagen of the liver is quite distinct or that the body axis is determined long before organ differentiation begins. That region which may be for a time dominant exerts a depressing influence, probably as hormones, upon the growth of other structures in the body. If by mechanical or chemical influence the dominant growth point of an embryo is made less active, the more dormant structures become proportionately active and, thereby, normal development is interfered with to the extent that structural abnormalities may be produced. By thus affecting changes in relative formative potencies in the parts of an embryo at different periods in development, abnormalities varying from changes in a single organ to double monsters and twins may occur. From such a discussion the reader is carried to a consideration of the postnatal development and determination of body type or

constitution. The thyroid, pituitary and other hormone producing glands are shown to have a distinct bearing upon the formation of a normal body type. Studies upon achondroplastic and ateliotic dwarfs and acromegalic humans and their canine counterparts, the bulldog, Pekinese and Great Dane, as well as upon distinctly normal types demonstrate that the regulatory effect of the internal secretions is inherited. The gonads, in addition to their effects in the embryo, in the young at puberty, and in senile individuals, provide for the reproduction of the animal and also form a basis for a functional rhythmicity in the adult. A discussion of the influences of the gonad secretions on the structure of the adult body in puberty, maturity and senility completes the substance of the book. This work is an exposition of a very modern concept of the relations of internal secretions to structural changes in the animal body. Although non-technical it derives authority from the author's extensive researches in this field.—W. T. D.

TO MY DOOR

If genius or the studious brain
By happy chance should kindly deign
To tap upon thy wooden side;
Open my door, fly open wide.

To gentle courtesy, to grace
To wit, kind heart and smiling face,
To the frank brow, the honest hand,
Open my door wide open stand.

To love, to friendship and to truth,
To interesting age or youth,
To worthy rich or worthy poor,
Stand ever open wide my door.

If formal folk should visit make,
Receive them for politeness sake,
But to the stupid or the bore,
Creak slowly on thy hinge my door.

—Anon.

FORMULA FOR OPTIMIST

They found a little courage
That simmered in the sun,
They blended it with patience
And just a spice of fun;
They poured in hope and laughter
And then with a sudden twist
They stirred it all together
And made an "Optimist."

—The Chaser.

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CARDIAC DISEASE COMPLICATED BY PREGNANCY

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Cardiac disease as far as it is related to pregnancy may be placed in three groups: (1) Those cases in which there is a mild degree of cardiac involvement, and which is only discovered in the routine physical examination. (2) Cases of moderately advanced cardiac disease, in which, however, there has never been any break in compensation. (3) Cases of advanced cardiac disease, in which there has been a break in compensation, or in which a break is impending. In this classification no mention has been made of any definite type of lesion, and this has been purposely avoided, as the concensus of opinion at the present time appears to be that the type of lesion makes absolutely no difference; and it is the condition of the myocardium, or "reserve power," which is the important thing in cardiac cases, in their relation to pregnancy.

It is of interest to note, however, that in 268 cases collected by Fullner, Porak, Vinay, Pardee and DeLee the various forms of heart disease are:—mitral regurgitation 74; mitral stenosis 50; double mitral 76; aortic regurgitation 20; aortic stenosis 2; combined mitral and aortic 41; and 5 cases diagnosed as myocarditis without any lesion being specified.

Beck claims, and is supported by DeLee, that the cases of mitral stenosis are the most treacherous, because practically always there is some associated myocarditis. Cardiac disease as regarded in this paper, will not be considered as heart disease in itself, but rather only as it will be affected by pregnancy and labor. The obstetrician, nevertheless, will be called upon to view the situation from many different angles.

First of all let us consider unmarried girls, who have been told they have heart

disease and come for advice as to whether or not they should get married. Of course a girl with serious heart disease will be better off if she remains single, and does not attempt to have children. The difficulty is, however, that she has set her mind on getting married, she will go to enough doctors until she finally finds one who will give her the kind of advice she is looking for, and tells her that it will be all right.

She then becomes married, and another problem presents itself. Still feeling that she should not become pregnant, the doctor advises various methods of contraception, which probably will work very well for a time, but sooner or later, because of carelessness, or because of the fact that all methods of contraception are by no means certain, she now becomes pregnant.

If at this time she comes for advice—then what is to be done? If, upon examination, the physician feels that the cardiac condition is too serious, it is probably better to advise that the pregnancy be terminated. If so, by what method shall it be done? One course open is simply to do the traditional dilatation and curettage, which relieves us from our immediate difficulties. Before long, however, we will probably be up against the same situation again. It is probably better, therefore, that the uterus be emptied, and then under morphine and scopolamine, and with light nitrous oxide anaesthesia, the abdomen be opened and some simple method of sterilization be performed from above. This, of course, does not entirely get one out of his difficulties for the cardiac disease still remains with the patient. She is, however, practically certain that she will not become pregnant again, and at least one of the difficulties has been eliminated.

One other course is open to the obstetrician. If the woman is particularly desirous of having a baby, he may explain to her the dangers of going through with the pregnancy, and then tell her that if she wants her baby badly enough, and is willing to make a great amount of personal sacrifice, that he will endeavor to follow her through her pregnancy with the stipulation that if at any time he considers the situation dangerous, he shall at that time empty the uterus.

AN ILLUSTRATIVE CASE

One such case has recently come to my attention which illustrates the point so well, that perhaps it may be permissible to describe it in this connection. A young

woman, 26 years of age, presented herself at the doctor's office declaring herself to be pregnant. On examination she was found to be three to four months pregnant, and also on further examination it was found that she had a double mitral disease, —(mitral insufficiency, with a relative stenosis.) The doctor who examined her told me it was his impression that this heart was just on the verge of decompensation. He advised a prophylactic abortion, but the woman so strongly insisted that she be allowed to have her baby he finally consented to watch her through her pregnancy, provided she was willing to make enough personal sacrifice, and to implicitly follow his directions. This she consented to do.

First of all he insisted that she move from her home on Long Island, and take an apartment in the city, near his office. She was then instructed in the proper hygiene of pregnancy, and above all to avoid any possible exertion. A considerable portion of her time was spent in bed. She was also referred to an internist, who followed her condition from week to week. Much to the surprise of her doctor her heart actually improved under this rigid regime, and she was carried along until about two weeks before the time of her expected confinement. At this time she was sent to the hospital, placed in bed and given small doses of digitalis. About one week before her expected confinement, a Caesarian section, classical type, was performed, and a living male infant delivered. Shortly after her confinement, she suffered from the over effect of digitalis, although the dosage had been small, and according to the usual methods of reckoning, there was no possibility of over-dosage. She developed a condition of partial heart block, with numerous extra-systoles, but finally because of her splendid co-operation, she rallied and made a wonderful recovery. It is interesting to note that this same woman absolutely refused to be sterilized, and the doctor had to be content with doing the abdominal operation, without sterilizing her as he had originally planned to do. To show, however, that this method of procedure is not without danger, another case of somewhat similar circumstances will also be cited.

In this case a young Italian girl, 19 years of age, presented herself at the Out Patient Clinic of the Long Island College Hospital when six months pregnant. On physical examination it was discovered that she had a slight malar flush and her neck veins

were somewhat prominent. The heart, especially the right heart, was slightly enlarged, with a heaving impulse at the apex. A low pre-systolic and a louder systolic murmur could be heard. A diagnosis of mitral insufficiency and stenosis was made. Upon questioning it was found that she had been attending the Cardiac Clinic for the past three years, and had been in trouble more or less during her entire life. Her condition was explained to her, and a plan outlined similar to the one described in the preceding case. This girl, however, was a poor girl, who had a sick husband at home, and who was expected to do the family housework. After following her for a month it was noticed that she was becoming more dyspnoeic, and that her ankles were beginning to swell; in short beginning signs of decompensation were appearing.

At this time she was sent to the hospital, where she remained for a month and a half, most of the time in bed, with absolutely nothing to do which required any exertion whatever. She was now about two weeks before term, and a Caesarian section had been planned for a certain Thursday morning, about ten days before the expected date of confinement. On Tuesday evening, however, following an emotional upset, due to some disturbance with her sister, who had visited her during the afternoon, she set up an acute decompensation, unfortunately fell into labor, which could not be stopped with large doses of morphia, and died the following day, a typical cardiac death. The strain was too much for her.

Everything mentioned thus far has been more or less of a general nature regarding the general management of cardiac cases complicated by pregnancy. Let us now consider them more specifically, and in order in which they were originally grouped at the beginning of this paper.

SPECIFIC FEATURES IN MANAGEMENT

1. Mild degrees of cardiac disease discovered in the routine physical examination. These cases should be carefully followed during pregnancy for evidences of decompensation; and at the onset of their labor should be given some form of analgesia. In this type of case the typical "Twilight Sleep" is of the greatest value. When the second stage is reached and the head hits the perineum, an episiotomy should be done and forceps applied, in order to reduce as much as possible the amount of voluntary effort.

2. Cases of moderately advanced cardiac disease, in which there have never been any break in compensation.

Most of the authorities on this subject feel that we usually "have one break in compensation ahead of us." That is to say the patient may be carried along, and should a break in compensation occur, she may usually be carried past this one break. It is also more or less generally accepted that one should not wait for a second "break".

The treatment in this type of case therefore will depend largely upon the estimation of the obstetrician as to the severity and length of the labor. In multiparous patients, in whom one has reason to believe the labor will be short and easy, a plan similar to the one outlined in the preceding group, eg. (morphine and scopolamine), may be followed. In primipara, however, the situation is different, for we can reasonably expect a rather long, and perhaps difficult labor. In these cases it is perhaps better to do a Caesarian section before the onset of labor, or at the very latest, as soon as labor has begun. A case to illustrate this point is as follows:—A young woman, age 24, was admitted to hospital with known double mitral disease, but as yet had never had any decompensation. A Caesarian section had been planned, but at onset of labor the head was already so firmly engaged, and so low down in the pelvis, and the labor progressed so rapidly and easily that she was allowed to deliver from below. The entire labor lasted only six hours and twenty minutes, under typical "Twilight Sleep," so that there was apparently very little strain on the patient.

Convalescence was prompt and uneventful, and it would seem that this was a very happy termination to a case that had been causing considerable worry. That it would have been better for her to have had a Caesarian section, however, is shown by the fact that in less than two months following delivery she began to complain of the following symptoms:

Distress in epigastrium, palpitation, swollen ankles and legs, spots before her eyes, enlargement of abdomen, and marked dyspnoea and orthopnoea. She returned to the hospital and examination showed:—The patient had to sit up in bed in order to breathe; there was a considerable degree of secondary anemia, the heart enlarged, a marked shock, and thrill felt over precordium, pulse irregular with numerous extra systoles and a loud, blowing systolic

murmur, also a short pre-systolic murmur could be heard at the apex. The pulmonic second sound markedly accentuated. The abdomen was markedly distended, and filled with fluid, with the liver extending down to below the umbilicus. There was a marked oedema of lower extremities extending up as far as the knees, also considerable oedema of eyelids. A diagnosis of double mitral disease with decompensation was made. Apparently, although the strain of her labor had been very slight, it had been more than this particular patient, with her amount of reserve power, could stand.

Another point which should be mentioned in connection with this group, which are allowed to deliver from below, is as follows:—Frequently, immediately after the birth of the child, when the uterus contracts down, there is an outflow of blood which has occupied the large uterine sinuses back into the general circulation, with the result that the heart which has already been taxed practically to its limit, is not able to handle the extra load. Preparations should have been made so that an immediate phlebotomy can now be done, and stimulants should also be in readiness. The further treatment of these cases which undergo decompensation will be described in connection with the next group of cases, which will now be considered.

ADVANCED CARDIAC DISEASE

3. Cases of advanced cardiac disease in which there have been a break, or in which a break is impending.

As has been mentioned in discussing the previous group, it is usually not safe to wait for a second break in compensation. Let us then consider a case under observation, in which a break has just occurred. What shall be done when we see a woman coughing, blue at the lips and finger tips, swollen ankles, perhaps ascites, and rales in the dependent portions of chest? By most obstetricians it is now accepted the usual medical treatment of digitalization, rest and restricted fluids is not sufficient, and moreover if this method of treatment alone is employed the patient will soon be dead.

The routine followed in the Obstetrical Department of the Long Island College Hospital is as follows:—

1. Large doses of morphia, enough to keep the patient absolutely quiet. To be more specific let us say that morphine sulphate gr. $\frac{1}{4}$ is given hypodermically at once, and then depending on whether or

not the patient is restless, the drug is repeated in $\frac{1}{6}$ gr. doses at regular intervals.

2. An immediate phlebotomy. Relief must be obtained at once for the overburdened heart, and this procedure should not be postponed until the lungs are filled with fluid, for then when we attempt to lessen the burden upon the right heart, we are practically up against a hopeless proposition.

The amount of blood to be taken off depends on the condition of the patient, and most especially upon the effect the withdrawal of blood has upon the pulse. If patient's pulse suddenly starts to increase in rate, becomes more feeble, and irregular, the phlebotomy must be stopped.

It is unnecessary to pay any attention to the blood pressure, for in many instances, even though the phlebotomy has been large, there is but little change in the blood pressure. The usual amount of blood which is taken off varies from 300 to 500 cubic centimeters.

3. If there is any tendency to pulmonary oedema, the patient is placed on her side with her head as low as possible, which seems to favor drainage. Counter irritation—e.g. flax seed poultice, or cupping, is then applied to the chest. Atropine may also be given to help dry up the secretion.

4. The usual medical treatment is also given, viz:—

Digitalis, usually in large doses, until patient is digitalized, and then 25M per day. Stimulation in form of caffeine is also given in an effort to bridge the patient over her temporary embarrassment. Fluids are restricted.

It cannot be too strongly impressed, however, that the important factors in this method of treatment are: early phlebotomy, and enough morphia to keep the patient absolutely quiet.

A typical case is as follows:—

The patient, a girl of 26, admitted to hospital for observation and found to have loud, blowing, systolic murmur at the apex, transmitted to axilla, and an accentuated pulmonic second sound. She was practically at term, but not in labor. Caesarian section (elective) was performed under morphine and scopolamine with gas anaesthesia. Two days following the operation there was a break in compensation, apparently initiated by a rather moderate amount of abdominal distention, which pushed the heart upward and outward. The patient was coughing, spitting up

blood, somewhat cyanotic, and pulse 136, and very weak and irregular.

A phlebotomy of 450 c.c. was done immediately, the patient was already on regular doses of morphia, so that an extra one-sixth of a grain was sufficient to make her perfectly quiet. She was placed in the Trendelenberg posture at once, and atropine sulphate gr. 1/100 were sufficient to relieve the pulmonary congestion. The patient had already been digitalized, and temporary stimulation was furnished with camphor in oil and caffein. On the next day patient's pulse was down to 110, much more regular and subjective symptoms rapidly clearing up. The day following her pulse was 80, and from this point patient made an uneventful recovery and convalescence.

SUMMARY

1. Heart Disease complicated by pregnancy is a serious condition.
2. The heart does not behave as it does in ordinary cases of chronic heart disease.
3. Therefore the ordinary treatment is not sufficient.
4. An obstetrician is as necessary for their proper management, as is the cardiologist.

RECENT ADVANCES IN THE THERAPY OF TUBERCULOSIS*

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Briefly I will summarize and attempt to evaluate the important therapeutic agents in tuberculosis. Comparing the chances of lasting improvement or of recovery which a tuberculosis patient had twenty-five years ago with the prospect of healing which he has nowadays, there is but one conclusion: they have advanced and improved remarkably.

The five methods of treatment at the beginning of the century were:

1. The classical air and rest cure.
2. Immunology, embodied in tuberculin treatment.
3. Chemotherapy.
4. Collapse therapy and,
5. Heliotherapy, which is not recent, but was used long before the day of Hippocrates.

Comparing the fate of these five methods during the last twenty-five years, we find that the rest and fresh air cure has

stood the test of time, and it shall remain as the foundation of whatever treatment one might undertake against tuberculosis. But it must be admitted that the proportion of cases which can be restored to health by sanatorium treatment alone is, after all, small.

The immunological or tuberculin treatment has been given a fair trial. It has failed. Tuberculin does have some effect on tuberculous lesions.

The hyperaemic and inflammatory changes which a hypodermic injection determines at the site of a specific lesion is followed by a tendency to form scarlike fibrous tissue. Microscopic observation of such reactions in the lung are impossible and there is always the danger of extension and ulceration of the lesion.

Sohli's method of employing minimal doses at the beginning of treatment and gradually increasing, avoiding carefully any kind of general or focal reaction, has also failed to give us a dependable method of treatment. The same may be said of the countless modified preparations of tuberculin, bacillary emulsions and extracts, or more or less defatted abstracts, or the partial antigens.

VACCINATION OF THE NEWBORN

It may be well here to mention the B. C. G. process, vaccination of the newborn infant against tuberculosis with the Bilitated bacillus of Calmette-Guerin. Calmette in conjunction with Guerin cultivated the tubercle bacilli in pure ox bile mixed with glycerin in proportion of 5 to 100. This culture medium, extremely alkaline, swells and saponifies the waxy and adipose shell that covers every tubercle bacillus without influencing unfavorably the vitality of the tubercle bacilli. After having grown on the bile glycerin media for a period of thirteen years, 230 cultures, a race of bacilli was obtained that lost all their former property of producing tuberculous lesions, but this new race of bacilli retained the power of producing tuberculin and of calling forth the formation in the organism of tuberculous antibodies.

This is precisely the bacillus that is utilized under the name of B. C. G. for creating immunity in newborn infants. Dosage and method of administration: In the form of a light emulsion, that contains in a dose one centigramme of bacilli; that is, about four hundred millions of tubercle bacilli, the infant absorbs through the mouth half an hour before he is nursed, three such doses in succession with an

* Read before the Calhoun County Medical Society February 7th, 1928.

interval of 48 hours between them, on the third, fifth and seventh days after birth. Every dose is given in a small spoon, mixed with a little milk. The emulsion must be more than ten days old, as it is essential that the bacilli it contains should remain alive.

CHEMOTHERAPY

The most noteworthy chemotherapeutic agent used in the treatment of tuberculosis during the past year is Auro-thio-sulphate of sodium, or sanocrysin. It is an inorganic double salt of gold given intravenously beginning with a 1/10 to 1 gramme dose, much in the same manner as salvarsan. It was discovered by Holgar Moellgarrrdt of Denmark, and the principles recommended for its use by Moellgarrrdt seemed sound in conformity with Ehrlich's postulates. However, we may say that the past three years sanocrysin has been tried honestly and under the most favorable conditions by tuberculosis experts in many countries, both experimentally and clinically. The results have led to disappointment and failure. The toxic symptoms determined by sanocrysin are very similar to those of poisoning by a metallic substance, like mercury.

ARTIFICIAL PNEUMOTHORAX, SOUND

Pneumothorax or collapse-therapy remains then as one universally developed procedure in the treatment of tuberculosis. It is based on the soundest anatomical and physiopathological principles. Its history dates back more than a century ago. The reasons for its slow development are due to two factors; first, the more recent advent of aseptic surgery, and second, the discovery of the X-ray. The progress and improvement of artificial pneumothorax have run exactly parallel with the progress and improvement of X-Ray technique. Its use is rapidly becoming more universal.

Artificial pneumothorax wins its most striking success in cases, which before its advent, would have been regarded as hopeless, where the sputum is abundant and the fever high. Such cases can be restored to health with a full capacity for work. Tuberculous women can regain the rights of motherhood. They can bear healthy children and rear them.

The advances made in X-Ray technique have greatly enlarged our diagnostic facilities and consequently the group of patients suitable for collapse-therapy. One may say, probably without exaggeration, that at some period of their history, the majority of tuberculous patients who die

have been, at least temporarily, in a condition justifying artificial pneumothorax.

FAVORABLE TO COLLAPSE-THERAPY

The conditions for success in collapse-therapy are unilateral disease and a free pleural sac. The cauterization of pleural adhesion through a thoracoscope (known as the Jacobean method) may be possible in some cases, but its use is limited. Collapse induced by extra pleural thoracoplasty has improved in technique considerably within the last few years. It has the disadvantage of unrevertible collapse, throwing the lung permanently out of function, whereas artificial pneumothorax in a large proportion of cases, allows the once diseased lung to be restored functionally. Thoracoplasty is a substitute for pneumothorax when the latter has proven impossible or inefficient.

Phrenicotomy, which is section of the phrenic nerve as a method of collapse, is limited in its use, and then only when pneumothorax has been found unfeasible. It is best applied to lesions localized to the base of the lung and when they are situated in the immediate neighborhood of the diaphragm.

The technique of artificial pneumothorax has improved in many ways: gas embolism may be controlled; exudates are not serious drawbacks; they may be tapped, even when they become thick and turbid. Oleothorax in such cases has proved of value: example as gomenal 5 to 20% in olive oil. This maintains the pneumothorax and controls the formation of adhesions.

The development of contralateral lesions is one of the most frequent obstacles to success. Often the original collapse may be maintained if the patient is put on prolonged bed rest. If the collapse of the primarily affected lung has lasted long enough, and we may presume that it has resulted in healing, we may let the pneumothorax on that side resorb and induce collapse on the other side. Or, if the danger be urgent, collapse may be induced in the contralateral lung before the first pneumothorax has entirely disappeared. Bilateral collapse may be attempted in very selected cases where the lesions are progressing rapidly and one feels there is nothing to lose.

Collapse-therapy is a mechanical treatment; though it improves the prognosis, it is not specific. Regardless of what new advances may come from the immunological or chemotherapeutic fields, collapse-

therapy will always hold at least second place.

SUNLIGHT THERAPY

Just a few words on heliotherapy which is one of the very oldest therapeutic measures. Long before Christianity we had the sun worshipped and the Greeks and the Romans had their solariums.

In the general treatment of tuberculosis exposure to cool air, promoting tone and metabolism, is as important as exposure to light. The true value of actinotherapy in the treatment of the various forms of tuberculosis is neither sufficiently recognized nor admitted. Whilst a growing body of opinion is agreed as to its usefulness in tuberculous lesions involving the skin, glands, bones and joints, there are many adverse opinions expressed as to its treatment of pulmonary tuberculosis.

Actinotherapy in regard to tuberculosis is not yet placed on a proper scientific footing. Technique and dosage differ widely in different hands, as do also the sources of radiation which are employed. Some general factors may be stated upon which all of us agree. First, actinotherapy acts on the human tissues as a general stimulant, and the stimulus must be adjusted to the patients' powers of resistance. If dosage is correct, it is usual to find a gradual improvement resulting in the patient's condition, and that wherever the seat of the tuberculous disease may be, calcium metabolism is stimulated, appetite and digestion are improved, and the body weight increased.

Actinotherapy acts

- (1) by stimulation of the central nervous system via the nerve endings in the skin
- (2) through the blood stream.

In the employment of actinotherapy there are three principal sources:

1. Carbonic arc.
2. Quartz mercury vapor tube.
3. The Tungsten arc.

All of these have their respective values and separate indications in different cases, according to the nature, extent and situation of the tuberculous lesions, the stage of the disease and the patients' "Resistance" to it. No one source is of universal value. So far as cases of pulmonary tuberculosis are concerned, nothing but failure will result if cases are treated when the patient's temperature is 100 degree F. or over. A rise of temperature over 100 degree F. is an indication that treatment should be stopped, and the patient kept at

rest in bed. Treatment can be resumed when the temperature falls to normal, and the dose lowered.

MANY MAY BE HELPED

With great care in finding the proper dosage for the particular individual a very large proportion of pulmonary cases can be helped toward recovery, including cases which had previously been on a down-grade. Such, at least, has been my experience. In the other types of tuberculosis, the non-pulmonary types, rapid improvement and cure result in the majority of cases treated if reasonable precautions are observed.

It is probably better to under-radiate the patient than to over-radiate him and see how rapidly we can pigment him, for tanning is not a therapeutic index. It has been shown by carefully studying the effects of actinic rays on the minute structures of the skin that overdosage will produce degeneration of the prickle cells associated with an accumulation of red blood cells and leucocytes in the blood vessels of the irradiated area, dilation of the capillaries, stasis, formation of leukocyte thrombi, and exudation of white blood cells. While the proper dosage of light has not yet been satisfactorily established, it is well to remember that a small dose will stimulate the tissues exposed, and that if a safe dose is exceeded, healthy tissue may be overstimulated or even destroyed.

INVOLUTIONAL CYCLIC CONJUNCTIVITIS—REPORT OF FOUR CASES*

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During the last two years the writers have treated four cases of recurrent cyclic conjunctivitis occurring in males at the period of sexual involution, but have been unable to find a similar condition described in the literature. Conjunctivitis does occur in females during normal menstruation but cyclic attacks after menopause has been established are unknown. From the standpoints of etiology and of pathologic physiology the disturbance here described has been difficult to understand but endocrine influence may be a factor.

Case 1—J. W. Y., aged 56, a banker,

* From the Ophthalmologic and Neurologic Departments of the Battle Creek Sanitarium Clinic.

came not as a patient but merely to bring his brother. On his arrival he had a severe conjunctivitis for which he requested treatment by the ophthalmologist. The condition was present in the right eye only. The patient stated that he had been suffering from similar attacks every twenty-eight days regularly in the right eye, the attack lasting four or five days, ceasing spontaneously only to recur exactly on the 28th day. Similarly, the left eye was affected but had its own cycle of from twenty-one to twenty-three days. The eyes were not involved simultaneously except by coincidence. The syndrome had been present for two years.

He stated that he had had painstaking attention, from good ophthalmologists, before, during, and after attacks without obtaining relief. In a search for a focus of infection he had had a turbinectomy with curettement of the ethmoids, a tonsillectomy, appendectomy and extraction of two teeth. The gallbladder had been found negative.

Examination: The irides were gray. The right eyelids were edematous, the conjunctivae acutely injected and much mucus was present. The inflammation began in the cul-de-sac, was at all times most marked in that region and spread from it in both directions. The left eyelids showed slight evidence of a receding inflammation. Twelve days later the left lids were in the stage of acute conjunctivitis. A culture was taken.

As the patient was highly intelligent and gave a clear history to the effect that silver nitrate, zinc, argyrol, mercurochrome, adrenalin, and boric acid with ice compresses had all been tried, the condition was treated with holocain, an astringent eye wash, and cold compresses. The patient was then referred for study from an endocrine standpoint.

When the culture, a complete physical examination supplemented by all the usual laboratory tests and an ordinary neurological examination revealed nothing abnormal, the case was examined from the standpoint of vegetative neurology. Here were found definite symptoms of a vegetative imbalance. Among the prominent findings were: frequency of winking, slowing of the pulse from ninety to fifty by pressure on the eye balls, mydriasis obtained by two or three drops of one to one thousand epinephrin in the eyes, extreme salivation by injection of pilocarpin, absent gag reflex, hyperacidity of the stomach, pylorospasm, frequent bowel ac-

tion, low blood pressure, cold and clammy hands and feet, hyperidrosis, pollakiuria and mydriasis. His basal metabolism was found to be minus eighteen and his glucose tolerance was as follows:

At time given		½ hr.	1 hr.	2 hr.	3 hr.	4 hr.
Blood Sugar.....	88	143	200	139	69	71 mg per 100 cc.
Urinary Sugar	9	37	107	365	225	6 mg per hr.

The patient stated that ophthalmologists had laughed at him and called him a freak, and the writers must confess that they too felt a tendency to consider the case lightly. On giving it serious thought, however, it seemed to us that there was only one idea worth while entertaining; namely, that the patient was at the period of sexual involution and while his cells of Leydig were hypoactive, whatever 'ovarian' tissue the patient might have in his body was taking the upper hand. In view of his hypometabolism, he was given thyroid substance, grain one-half, twice a day, and to overcome the testicular hypo-function he was given orchic substance grains V, t.i.d.

The patient left the institution and was not heard from for a year and a half. On his return to make a social call only, he stated his attacks had continued for two months after taking the medicine but the conjunctivitis then ceased entirely. He has never had conjunctivitis since.

Case II. A. R. W., aged 47, complained of pain in various parts of his body and stiffness. To economize space, the many symptoms of his condition will be omitted and only the general statement made that he was suffering from scleroderma diffusa. There was no neurosegmental distribution as occurs in some cases.

He also complained of a conjunctivitis that occurred in both eyes every twenty-eight days, lasting four or five days regardless of all treatment. It had been present for only three months. Examination of the eyes showed only a marked injection of the conjunctivae with much mucous discharge. No cultural growth was obtained on the usual media. The irides were gray. Examination from the standpoint of vegetative imbalance did not give the definite picture that had appeared in the first case. There were only a few symptoms that might be explained on some other basis. His glucose tolerance and basal metabolism were normal. The patient was advised to take orchic substance and to keep in touch with the writers. One year later a follow-up letter brought the following reply, "The condition (the scleroderma) is exactly the same. Have done

no doctoring or taken any medicine; have taken chiropractic treatments from two to three times weekly for one year with no results for betterment and never have been troubled with any more periodic conjunctivitis eye trouble.” (Note that he did not take the orchic substance).

Case III. V. M. G., Norwegian, aged 58, stated that he had been about the country a great deal during the last five years for treatment for a recurrent conjunctivitis and that he had had most thorough examinations without a positive diagnosis having been made. His eyes were separately involved, never simultaneously, so that he had conjunctivitis lasting a few days in either one or the other about every two weeks. He had not kept a careful record of dates however but was certain that the eyes were always alternately involved. The disturbance always cleared up spontaneously and was uninfluenced by treatment. The patient was definitely neurotic. As in the first case, a general examination gave very little information. The irides were gray. Examination from the standpoint of vegetative neurology gave the following symptoms: history of overwork, fatigability, both mental and physical, drowsiness, dry hair, bradycardia, hypotension, vasomotor disturbances, gastric hyperacidity, pylorospasm, low basal metabolism, and anhidrosis. The eye condition was typical of a severe acute catarrhal conjunctivitis but began at the cul-de-sac and spread, receding in the opposite order.

In view of our experience with the previous case, we immediately prescribed thyroid, grain one-half, after breakfast daily and orchic substance, grain V, t.i.d. The following two expected attacks began but never developed. Instead the condition assumed a new order, and occurred as follows: Left eye Sept. 22; right Oct. 21; right Nov. 17; left (very slight) Nov. 20; left Dec. 15. The dose of orchic substance was increased but we lost contact with the patient and do not know the subsequent history.

Case IV. Q. S. W., aged 55, with gray irides, suffered from an eczema of the scalp and chronic cholecystitis. He also complained as the others had of a periodic recurrent conjunctivitis. This appeared first on the third of August, then on the third of September and on the fourth of October in 1926. Local treatment never aborted the attacks and appeared to do very little good.

The patient was to come for a neurological examination but in the meantime his

TABLE I																	
I	Cases	II	M	54	Amer.	Gray	Alter- nately 28 and 21 days	Never	None	Vegetative imbalance	28 days right 21 days left	4 to 5 days	Entirely negative	None	2 years	Thyroid and orchic subst.	2 months
II	Sex	M	47	Amer.	Gray	Simulta- neously			None	Scleroderma diffusa	28 days	4 to 5 days	Entirely negative	None	3 months	None	Ceased spontaneously
III		M	53	Nor.	Gray	Alter- nately	Occasionally		None	Constitutional neurotic	Before treatment not known. After treatment 27 to 29 days	3 to 4 days	Slight injection	None	5 years	Thyroid and orchic subst.	Modified by treatment
IV		M	55	Amer.	Gray	Simulta- neously			None	Eczema of scalp	28 days	4 to 5 days	Entirely negative	None	3 months	None	Ceased spontaneously

eczema was treated and after the third attack, there was no recurrence of the conjunctivitis. The writers are inclined to consider this a case of spontaneous cure. If the eczema were the cause, we should be obliged to explain the absence of any conjunctivitis except for a few days each month.

For ease of comparison, the similarities and differences in the cases are shown in table 1.

Discussion: The condition described occurs in this small series in males beginning between the ages of 47 and 55 years. There seems to be nothing in common in these cases except sex, gray irides and the involutional period of life. The occurrence of gray eyes may be a coincidence. In the first case manifesting a definite vegetative imbalance with low basal metabolic rate, orchic substance and thyroid substance seemed to produce a rapid cure. Being unable to follow Case III we cannot discuss the result. It is our conception that a vegetative imbalance is merely evidence of a marked endocrine upset as the vegetative nervous system and the endocrines are one great system. We do not predicate that all males or that these patients have mixed gonad tissue but such a conception is useful in understanding the manifestations described. Certainly the monthly periodicity with a duration of a few days, with vascular dilation and mucous discharge with spontaneous remission is so characteristically female that a sex dyscrasia as a basis for the condition seems obvious. In the two cases of very short duration the cure was spontaneous. Since it is necessary to name the syndrome, the main characteristics suggest the name *Involucional Cyclic Conjunctivitis*.

SUMMARY

1. A syndrome apparently not hitherto described is presented and is called *Involucional Cyclic Conjunctivitis*.

2. The syndrome occurs in males at the involutional period (47 to 55 years), worse in those with a definite endocrine imbalance, ceasing spontaneously in others.

3. The characteristics are, attacks of conjunctivitis with mucous discharge, without infection, coming spontaneously at monthly intervals, frequently in one eye at a time, lasting three to five days, remitting spontaneously, uninfluenced by local treatment.

4. The condition is influenced by administration of orchic substance and by

correction of lowered basal metabolic rate by means of thyroid substance.

THE CANCER PROBLEM*

W. A. EVANS, M. D.

DETROIT

Among the important activities of the Wayne County Medical Society is its contribution to the cancer problem. Functioning in close co-operation with the American Society for the Control of Cancer, it has endeavored, first, to inform its membership of all advance in diagnosis and treatment and bring to them any other information of interest regarding malignancy, and, second, to call to the attention of the public the early signs and symptoms of cancer and to urge them to consult a physician at the first suspicions of such a condition.

The duties in this connection are assigned to the "Cancer Committee," a group selected because of their especial interest in this problem and their willingness to devote considerable time to its demands.

To accomplish its aims, the Society has inaugurated a "Cancer Week," during which time educational matter is brought to the attention of the public by pamphlets, speeches at various public gatherings, radio talks and press articles. In addition, free examinations are offered to the public at the several hospitals. To interest physicians, men of national prominence familiar with malignancy are asked to give teaching clinics and demonstrations and formal addresses.

CO-OPERATION OF LAY PRESS

The eighth annual such Cancer Week (February 28th to March 6th, 1928) has just passed into history, and a brief report of it should be of interest. Let it be said now that this work could not be satisfactorily carried on without the co-operation of the press, and the Society has been especially fortunate in that the Detroit Free Press, the Detroit News and the Detroit Times have manifested a fine spirit of co-operation, giving freely of space, and particularly of their advice in the arrangement of the material to be presented through their papers. If anyone ever doubted the power of the press in spread-

* Dr. W. A. Evans, to whom the Journal M. S. M. S. is indebted for this paper, prepared on short notice, is chairman of the Cancer Committee of the Wayne County Medical Society and also a member of the Detroit Health Commission.

ing medical propaganda, such doubt would be dispelled by observing the immediate response of the public to the articles which appeared during our last campaign. For instance, on the day breast cancers were discussed in the daily papers, the clinics were visited by patients desiring examinations for this type of disease, and on another day, when skin malignancy was emphasized, a response from patients suspicious that they were afflicted with lesions of such nature was noted.

The Society called upon Dr. William Patrick Healy, of New York, and Doctors Balfour and Rankin, of the Mayo Clinic, to assist in their campaign, Dr. Healey holding a teaching clinic at Harper Hospital on the first day of the campaign, and giving a formal paper in the evening before the Wayne County Medical Society on the "Diagnosis of Cancer by Gross Clinical Characteristics." The following week, to end the campaign, Doctors Balfour and Rankin took part in a Symposium on Gastrointestinal Malignancy, bringing to their hearers the results of treatment of such lesions by the surgical method.

While Dr. Healy is a gynecologist, his association at the Memorial Hospital in New York brings him into contact with all types of malignancy and his grasp of the subject was manifested in both his clinic and lecture. In his opinion, early diagnosis and classification and the proper choice and application of surgery and radiation result in reducing cancer deaths at least one-third. One gathered the impression that a proper application of radium and Roentgen therapy was replacing surgery as the treatment of choice in an increasing variety of lesions. Similar encouraging reports were made in connection with malignancy of the stomach and colon, Dr. Balfour reporting a relatively large extent of three year cures of cancer of the stomach and Dr. Rankin reporting control of malignancy of the colon by early resection of the diseased portion.

The number of patients presenting themselves for examination was in excess of the former clinics, and at several of the hospitals the congestion was so great that a considerable number were turned away. The estimated response to the appeal was about three thousand, and to date some 2,504 of these cases have been tabulated. Of this number, 403 were positive. That is, these cases either presented signs of definite cancer, doubtful cancer or precancerous lesions. The positive lesions were classified as follows:

	Positive	Doubtful	Precancerous
Mouth	3	12	18
Lip	2	16	4
			Benign tumors
Breast	34	28	30
		Suspicious	
Stomach	4	49	
Colon	2	12	
		Doubtful	
Rectum	7	2	
Cervix	16	17	
Fundus	3	13	
Skin	12		
Epitheliomata	28		
Senile Keratosis	26		
Moles	28		
Benign tumors	41		
Larynx	2		
Angioma	1		
Bladder	2		
	Suspicious		
Cheek	1		
	Positive	Suspicious	
Nose	2	2	
Parotid glands	1		
	Suspicious		
Wart	1		
Jaw	1		
Sarcoma Neck	1		
Lymphoma	2		
	Positive		
Mastitis	4		
Naevus	3		

It was the impression of those making the examinations that very few neurasthenics presented themselves and that, while many cases did not show signs of malignancy, still they were suffering from some organic disease. Those associated in these examinations feel that on the whole Cancer Week is serving a good purpose and should be continued, with modifications.

A SUMMARY OF TREATMENTS FOR
SYPHILIS EMPLOYED IN PONTIAC
STATE HOSPITAL

P. V. WAGLEY, M. D.
PONTIAC, MICHIGAN

Summary of the compilation of statistical data of this institution covering the treatment of syphilis in its different forms, that is, general paralysis of the insane, meningeal and vascular types, extending over a period of some ten years, shows a wide variation in the results thus far obtained. During this time patients have been given the latest approved methods of treatment. A complete review, with percentages would be too detailed; a brief summary from my observation will be attempted. The instance of the high percentage occurring in this hospital has merely broadened our scope by furnishing us a wealth of material.

One of the first handicaps is the difficulty in commitment, either by the form now used, or by the reluctance on the part of the family to admit patients to a State Hospital. This, with the peculiarity of onset of general paralysis, accounts in a large number of cases for the paucity of early

treatment before hospitalization, and, to a degree, lowers the percentage of remissions.

With the advent of neo-salvarsan and mercury many improvements were noticed, particularly the clearing up of the tertiary symptoms, such as skin lesions and ulcers. A certain percentage of remissions were brought about by this form of treatment, but we feel this was especially so in the vascular and meningeal types.

Also, from our observation of other cases of general paralysis of the insane who received no treatment, but who from some recurrent infection stimulated an active leukocytosis, complete remissions have occurred.

The insight gained from these observations led ultimately to our latest venture, that of the treatment of patients with inoculation of some form of malaria plasmodium, and a subsequent course of medicinal treatment in the form of arsenic preparations. The one now used in this institution is tryparsamide. We feel that in this form of treatment we have the best combination and have obtained the best results. The malaria leaves the patient somewhat anemic, and at the advent of the arsenic he is rehabilitated, so to speak, and, at the same time, the arsenic serves to clear up any troublesome local lesions and, perhaps, to a degree is a spirocheticide.

Patients treated with this form of therapy have shown complete remissions where other recognized forms of treatment have failed completely. During the 14 months malaria has been used in this institution, a large number of patients have been inoculated, and, almost without exception, the progress of the disease has been slowed or arrested, to the extent of rendering the patient more comfortable than heretofore deemed possible. Also, along with this, has been a large percentage of complete remissions. Just how long these patients will remain comfortable, and to what degree they will again resume their station in life, as yet cannot be determined.

The mortality from this form of treatment would not exceed more than 1.5 per cent in this institution. We consider it a safe mode of therapy.

The blood and fluid reactions do not show a corresponding improvement. From our observation few have been completely reduced, but, again, sufficient time has not elapsed to offer statistical information. Our observation, as stated above, will not permit us to offer any definite correlation or

percentage between either the serological or clinical results.

As compared with the former methods used, the results so far obtained are so gratifying, not only from the physicians' standpoint, but also from the patients', the families' and the institutions' side, as to warrant a vigilant and comprehensive study of this treatment, with a view of not only rendering patients amenable to hospital discipline but of again establishing them in society.

TREATMENT OF SYPHILIS IN PONTIAC STATE HOSPITAL AS IT PERTAINS TO MENTAL CASES

S. A. BUTLER, M. D.

It seems unnecessary to mention the ancient drug which time has honored in the treatment of syphilis, namely mercury. It would be interesting to know how early mercury was used in the treatment of syphilis, and, when one thinks of the thousands of people who have been treated by this drug, and the apparent cures which have been achieved, one is reluctant to forego the use of this powerful remedy in staying the ravages of syphilis in any of its forms.

With the discovery of the Spirochaeta, together with the perfection of the blood Wassermann, the diagnosis of syphilis, which heretofore had been so difficult, became comparatively easy. The Wassermann reaction paved the way for a more rational treatment of syphilis, and, since the advent of salvarsan in 1910, the treatment of both early and late stages of the disease has made rapid progress.

In State Hospital work the physician, so far as syphilis is concerned, is dealing with the late results of the disease, and its manifestations are very protean in type. While the individual may be afflicted with a form of psychosis in which we believe the syphilis is merely co-incident, nevertheless, we think that his syphilis should receive active treatment, as we cannot dismiss the possibility that the toxins of syphilis may, in some manner, be a factor in upsetting an individual of this type of mental reactions.

It has been noted among physicians in State Hospitals, which were in the old days called asylums, that patients afflicted with general paralysis of the insane, and, in fact, other mental disturbances, showed great improvement after having suffered from some localized infection. As an illustration:—A patient with general paralysis

of the insane developed a severe infection of his hand, arm, a carbuncle or often a bed sore. If he survived the infection, it was noticed that almost invariably his mental symptoms were greatly improved. Why this took place no one was able to explain, but it was a universally recognized fact.

Perhaps it was because of this striking phenomena that research men were led to inquire why fever, localized inflammation, brought about these changes in the body metabolism.

No doubt the leukocytosis which was produced by these morbid changes was responsible. If localized infections were capable of producing improvement in patients thus afflicted, especially with general paralysis of the insane, how much more might be realized in the way of recovery if patients were inoculated with something which would cause a more severe constitutional reaction, and thus speed up all the body defensive mediums.

It was, no doubt, on this basis that patients were inoculated with malaria. In malaria the therapist seemed to have at his command a method of producing a severe reaction, which was at all times under his control. After the patient had been inoculated with 2 c.c. of blood from one suffering with malaria, and had experienced about a dozen sudden rises of temperature, his malaria could easily be aborted by quinine and arsenic.

We have tried the malaria in a number of cases in the Pontiac State Hospital and the mortality has been very low. We believe that the patients treated by the malaria parasitic infection have received greater benefit than from any form of treatment thus far employed.

It is too early to draw positive conclusions, for one must bear in mind that general paralysis of the insane is a disease which is characterized by remissions, even if no form of drug or bacteria therapy is used. Our experience extends only over a period of a little more than a year, but we believe that we can conservatively state that patients treated with malaria have become more easily cared for in the institution. Aside from the improvement in their general health, instead of being a noisy, destructive patient, they become quiet and more or less passive, which has an economic value in institutional care.

We have had cases that came to us early in their psychosis, that is, in the early stages paralysis of the insane, when their symptoms were possibly more the result of a toxic state. After these cases have

been given malarial treatment, followed by tryparsamide, they have been able to leave the hospital, and at the present time are comfortable and able, at least in part, to look after themselves.

We feel that the results we have obtained by the malarial treatment, followed by tryparsamide, have been good, and that if the same form of treatment was used early in the disease, before mental manifestations declared themselves, more satisfactory and lasting results might be secured.

A NOTE ON THE TREATMENT OF GENERAL PARALYSIS OF IN- SANE IN THE PONTIAC STATE HOSPITAL

R. GRANT JANES, M. D.

From observation of cases treated with malaria in this institution, the results obtained, when followed by intravenous tryparsamide, are more encouraging than any other method that has been used. Those who were quite demented frequently ceased to deteriorate; others in a manic state but whose memory, sense of orientation and higher mental faculties were well preserved, tended to show complete recovery and returned to their original work. A number who showed progressive dementia, are now in an arrested state although still harboring delusions and will probably never be better; but their lives are much prolonged. Two individuals developed pneumonia from one to two weeks following treatment, and died; but their condition was considered hopeless before treatment was first instituted.

On the whole, malarial treatment arrests the course of the infection. The resultant mental state is then dependent upon the amount of destruction of brain tissue that has occurred, and the subsidence of inflammatory process of parenchyma and meninges, and the freedom of brain from action of the syphilitic toxin. This seems to be fairly well accomplished by malaria.

GYNATRESIA—A REPORT OF TWO CASES

B. W. MALFROID, M. D.

FLINT, MICHIGAN

Genital atresias cannot be fully understood without a definite knowledge of the major embryological processes occurring in the development of the human pelvis.

At about the end of the fourth week of

embryonal life in the human a definite deferentiation of tissue is noted forming on either side of the lower third of the body. These are known as the Wolffian bodies. They soon develop a tube-like structure which runs parallel to the long axis of the embryo, and the lower end becomes attached to the cloaca.

A week or two later the elements of the genital glands appear just inside the Wolffian bodies. These eventually become, in the female, the ovaries.

At about this same time there are seen developing just external to the Wolffian bodies two solid cylindrical masses which extend to the urogenital sinus. These are the Mullerian ducts. From these are developed the entire female genital tract to the vaginal introitus. Malformations of the genital tract must always point to a lack of proper development or fusion of these ducts.

At first the Mullerian ducts are solid and extend to the urogenital sinus as distinct unfused cylindrical tubes. In the normal development Muller's ducts run in very close approximation throughout the lower half and eventually fuse to form a unified structure. The upper half remains separated and eventually is differentiated to form the fallopian tubes. The upper part of the fused structure acquires a lumen first, while the lower portion which eventually forms the vagina, remains as a solid cylinder. This fusion takes place about the ninth week of embryologic life. At this time the uterus is divided into two hollow compartments. The separate uterine cavities exist until about the fifth month when the two are fused to make the one cavity. At about this same time the uterus becomes differentiated from the vagina by the development of the cervix. It is now assuming the form of a separate distinctive organ. In the following month the uterus develops muscle fibres and later the differentiation of special tissue is noted. During this latter period the vaginal tube has now become hollowed out and at the terminal end of the tube a specialization of tissues occur and the hymen is formed.

This rather brief resume covers the essentials of the embryology involved in malformations of the female genital tract.

CASE REPORTS

The first case that I wish to present is that of a young girl of fifteen. When first seen she complained of severe lower abdominal pain, crampy in character, and a continuous dull sacro iliac backache. She had always been in good health up to four months ago. Her menses began eight

months before. The first period was attended with some lower abdominal pain and the flow lasted for two days. Each period was accompanied with a greater amount of discomfort and gradually the lower abdominal pain became steady with but short intervals of relief. The menses were 2-3/26-30 day type and the flow was scanty. The last period occurred three weeks before, she flowed for about three days. The pain has become so severe and so continuous that the patient has been unable to secure but little sleep. On examination she had a temperature of 99.6; pulse 100; respiration 18; skin was dry but smooth. The head, neck and thorax elicited no pathology. Chest was normal as to size, sound and rhythm; systolic pressure was 98, diastolic 68. On inspection of the abdomen there was a definite mass discernable in the lower left quadrant. On palpation this mass was found to extend from the left parietal wall to just beyond the midline and from the level of the umbilicus downward into the true pelvis. It was doughy in consistency. The external genitalia were normal in contour but had a bluish discoloration. The left labia was pushed outward. The urethra appeared normal and the hymen had not been ruptured. The opening in the hymen was about 2 cms. in diameter. Rectal examination disclosed evidence of a fluctuating mass pointing into the introitus.

Laboratory findings were as follows: The urine was negative; R.B.C. 4,200,000. Leukocytes 12,400. Polys 79 per cent. Diagnosis of a gynatresia was made. Usual pre-operative treatment was given; Lithotomy position; skin preparation of 2 per cent mercurochrome. The hymen was dilated and on vaginal examination it was noted that the left wall of the vagina was pushed into the introitus, almost completely filling it up. A crucial incision was made in the wall and some of the tissue removed, about 1000 c.c. of thick, tarry, non-clotted blood mixed with some shreds, poured out under considerable pressure. Now the normal vagina could be examined, as the abdominal and pelvic mass had collapsed with the evacuation of this material. The normal cervix was noted and a small uterus was mapped out. The left border appeared to be continuous with a thickened mass of tissue, whereas the right border was well outlined. The right ovary could be palpated. On palpation through the incision an indefinite thickened smooth wall cavity was noted. We were unable to secure permission to do a laparotomy to clinch our diagnosis. She made an uneventful post-operative recovery. I have examined her since and she claims to have no distress whatsoever. I took occasion to examine her during a menstrual period and found a small amount of blood escaping through the opening in the left side as well as from the normal cervix. I have been unable to palpate anything in this left side which I would feel justified in calling a cervix or uterus. However in view of the history and the operative findings I feel warranted in the diagnosis of a uterus either didelphys or pseudo didelphys with an atresia of the left vagina.

The second case which I am going to present is quite interesting for adult females without any evidence of a uterus are rare. Miss L. P., age 23, engaged to be married, consulted me February, 1927. Her only complaint was that she had never menstruated. She has never experienced any type of a vicarious menstrual phenomena. With the exception of a period of approximately nine months during her thirteenth year she has always been in excellent health. During that nine months

she suffered a great deal of lower abdominal pain and claims that for several weeks she was practically bed ridden. Her recovery was slow. Her family history was unimportant. On physical examination she had the appearance of a well developed female. Her voice was normally pitched; skin was smooth and moist; and sclerae was clear. Her reflexes showed no abnormality. The nose, mouth and throat showed no pathology. The thyroid was normal in consistency and not enlarged. There was no evidence of a cervical adenopathy. The breasts were dome shaped, nulliparous in type. No pathology was noted in the chest. The heart was normal as to size, sound and rhythm; pulse rate of 80; systolic pressure 118; diastolic 70. The abdomen had a normal contour; there was no tympany; no areas of pain or rigidity. The mons veneris had normal fat content and the hair distribution was distinctly feminine in type. The labia were normal in appearance; the clitoris was not hooded, or enlarged. The urethra showed no abnormality. The hymen was imperforated. On rectal examination a definite thickened band could be palpated, extending from just posterior to the hymen, downward and backwards as far as the palpating finger could reach. Small masses the size and consistency of normal ovaries were palpated in either iliac fossa. Blood and urine examinations were negative. Operation was performed on February 14, 1927. The usual pre-operative medication was given. With the patient in the lithotomy position, and the field prepared, the hymen was incised and the redundant tissue removed. Just posterior to the vagina a dense thickened cylindrical mass was noted. This was incised and found to be a tubular structure the inner wall being glistening in character. The walls were collapsed and adherent. The adhesions were thin and separated quite readily. The tube followed the normal direction of the vagina. It was followed for about 11 cms. where it seemed to end blindly. No evidence of uterine tissue was found.

Dorsal position was obtained and skin preparation of picric acid. Midline incision was made extending from about two inches below umbilicus down to symphysis. Peritoneum was opened without difficulty. Patient was placed in the Trendelenburg position and the field carefully taped off. Careful exploration revealed the following condition. The ovaries were in about the normal position. The infundibulopelvic ligaments were small, made up for the most part of the small meso salpingx. The tubes were normal in appearance, the fimbriae were patent, the tubes were about nine cms. in length. The uterine ends were buried about 2.5 cms. apart in a bed of loose connective tissue just beneath a rather high reflection of the bladder fold. With an assistant holding his fingers in the vaginal tube careful palpation was made. The vaginal tube extended up into this tissue mass just below the bladder fold and the tubes apparently opened into the vagina though no definite opening could be demonstrated. No evidence of uterine tissue could be found. A rather normal appendix was removed in the usual fashion and a small section of the left ovary was taken for histologic diagnosis. Closure was made in the usual fashion. The vaginal tube was now packed with thick vaseline, great care being taken to balloon it out as much as possible. Post operative convalescence was uneventful. She was examined on the twelfth post-operative day. The vaseline had practically all been discharged. It was repacked and the

patient was asked to report in about ten days. She was not seen for approximately a month. The vagina now admitted two fingers for about ten cms. without discomfort. There were a few fine adhesions which were easily broken. This patient was married about eight weeks following the operation. I have had several occasions to examine her since and find that the vagina has remained patent. She suffers no discomfort and claims to have normal sexual reactions.

PATHOLOGICAL REPORT

Appendix. Micro. Glandularis shows a catarrhal reaction; diffuse eosinophilic infiltration, hyalinization of submucosa. Atrophy of muscularis. Paravascular round cell infiltration of peritoneum. Diag. Chronic Appendicitis chronic peritonitis.

Ovary shows hyalinization of the germinal epithelium, and some hyalinization of the stroma, follicular cysts are present and a partially developed corpus luteum. There is a deposition of haematoidin in one area from former hemorrhage. Diag. Ovarian tissue undergoing some hyalinization.

This case presents two possibilities to me. The first is that of a normal fusion of the Mullerian tubes but a lack of tissue differentiation so that a distinct uterine body was never formed. The second possibility, and I believe a plausible one is that we were here dealing with a case of a rudimentary lightly functioning uterus with an atresia of the vagina. That when the normal menses began the atresia was not noted or at least not treated. The accumulated menstrual blood, because of the pressure exerted cause a necrosis of the poorly developed uterine tissue and nature slowly reabsorbed the blood and the normal uterine tissue was replaced with fibrous connective tissue.

PREVENTION OF HEMORRHAGE FROM TONSILLECTOMY

H. T. GRAY, M.D.

OWOSSO, MICH

Many articles have been written about various methods for the control of hemorrhage during and after tonsillectomy. Many operators claim that they find it necessary to apply ligatures to bleeding points following the removal of adult tonsils. I believe that this is very rarely necessary if certain routine precautions are observed before all tonsillectomies and proper treatment administered during and after the operations.

In the last five years we have operated more than one thousand cases without any

serious hemorrhage in any case and most cases very nearly bloodless. We believe that any experienced nose and throat surgeon could do as well by using the same methods.

The following routine precautions and methods are used in all cases where it is possible. An examination is made of the patient's nose, throat and chest; a urinalysis is made and coagulation test of the blood and in adult cases the blood pressure is taken. If the patient has diabetes mellitus he is not operated. If the coagulation time is too long, if the blood pressure is much too high, or if the history of the case indicates that he may be a hemophiliac, then he is advised to not have an operation unless treatment improves the blood condition sufficiently.

PRECAUTIONARY AGENTS

Beginning three days before the operation the patient is given calcium lactate gr. V, four times a day and about 45 minutes before operation an adult is given one hypo of Hyoscine gr. 1/100, morphine gr. 1/4, and cactine gr. 1/67, combined with 2 c.c. of hemostatic serum (P. D. & Co.). Children are given 2 c.c. of hemostatic serum, but usually no morphine unless they are large and strong, then morphine gr. 1/10, will help prevent pain and keep them more quiet, following the operation. In adult cases a 2 per cent solution of Novocain 5iv combined with 1 to 1000 solution Adrenalin Chloride m viii is injected around each tonsil (after they have been swabbed with a 2 per cent Mercurochrome solution). Then tonsils are very carefully dissected so that the pillars are not cut nor injured, then the tonsils are removed with a Tyding or Brown snare.

A gauze pad saturated with a 12 per cent Neosilvol solution is applied immediately with a goose neck forceps and pressure made with it for 3 or 4 minutes and later, if there is any oozing of blood, a pad saturated with Glycerite of Tannic acid is applied with pressure. The patient is put to bed with the head and shoulders high, an ice bag applied to the throat, an ice bag to the head and a hot water bag to the feet.

I should explain that we have the advantage of private hospital rooms and a nurse with special training, to care for these patients and be in constant attendance following operations, which conditions can not always be obtained in general hospitals.

In rare cases where there is a tendency

to bleed following operations in spite of these precautions, then another hypo. of Hemostatic Serum is administered and a sponge saturated with Glycerite of Tannic acid is again applied, with a goose neck forceps and gentle pressure made for a few minutes.

We realize that not one step in this technique is new to the profession, but it is a combination of prevention and methods of treatment that has proven successful and made the use of ligatures unnecessary.

CHRONIC DUODENAL ILEUS

J. E. BELLAS, M.D.

MARQUETTE, MICHIGAN

Considerable interest has been aroused of late in this country and abroad, with regard to the condition variously known as chronic gastro-mesenteric ileus, chronic duodenal ileus, and chronic duodenal stasis. This condition consists essentially of a chronic dilatation of the duodenum caused by interference with the onward passage of contents as a result of obstructive pathological or mechanical conditions, usually at the terminal end of the duodenum.

It has been known to exist for at least 20 years, but apparently it has not received the attention that its importance deserves. The fact that there is no description of this entity in most of the standard textbooks of today, beyond a mere mention, is evidence of this. Recently, however, several very good articles have appeared on the subject, e.g. by Wilkie, Bloodgood, Horsley, etc.

PREDISPOSING MORPHOLOGY

Anatomy and etiology—The duodenum is universally divided into four parts: the superior, the descending, the transverse, and the ascending, the terminal portion ending in the duodeno-jejunal junction. This junction is marked by the attachment of the ligament of Treitz to its superior surface, whereby it receives some support, and by the fact that the superior mesenteric vessels in their downward course to become distributed in the folds of the mesentery, cross just proximal to this point. Any condition which may partially hinder or obstruct the advance of the duodenal contents, will give rise to the condition known as chronic duodenal ileus. The following conditions may operate as the cause:

1. Kinks by congenital bands, or by the ligament of Treitz.
2. Kinks by inflammatory adhesions, e.g. from adjacent inflamed glands.
3. Constriction of lumen by an intrinsic or extrinsic tumor.
4. Valve-like structures within the lumen, narrowing the latter.
5. Complete atresia. (congenital).
6. Chronic dilatation of the duodenum without obstruction at the terminal end, due to a disturbance of the sympathetic nerve supply to the duodenum.
7. Compression of the terminal end of the duodenum between the superior mesenteric vessels and the aorta.

The latter is the most common, and therefore the most important cause, and is the one with which this paper is concerned.

My interest in this condition was first stimulated by an article written by James McKenty¹ of Winnipeg, in 1918, in which he describes two cases severe enough to require operation, and observations on cases with milder degrees of obstruction. He reported three instances in the surgical literature in which the operation of duodeno-jejunostomy for this condition was done or suggested prior to the publication of his paper; namely, by Stavely², in 1907, by Beer³, in 1914, and by Bloodgood, who was probably the first to stimulate interest in this condition, but was not the first to perform the operation. During the years that followed, notably between 1923 and 1925, I had the good fortune to witness two cases while assistant in the Clinic of Dr. Clifford U. Collins, of Peoria, Ill.

In October 1926, while attending the Cleveland Convention of the Inter-State Post Graduate Association of North America, I had the opportunity of listening to an illuminating paper by Mr. Wilkie, Professor of Surgery, University of Edinburgh, and by a fortunate coincidence, while visiting the Cleveland Clinic, was enabled to see George W. Crile perform a duodeno-jejunostomy on a typical case.

That the condition is comparatively rare is apparently evident, but one gets the impression that it is by no means uncommon, and that a routine search for this condition in surgery of the upper abdomen, would disclose its unsuspected presence in a larger number of cases. When discovered, it is best to give heed to Dr. Blood-

good's observations, and ascertain whether there is not a ptosed giant cecum associated, which is dragging down upon the root of the mesentery and thus constricting the duodenum between the superior mesenteric vessels and the aorta.

SYMPTOMS OF CHRONIC ILEUS

These may be described as local and constitutional. The local symptoms arise from the mechanical obstruction to the normal exit of duodenal contents while the constitutional symptoms are caused by the chronic toxemia that necessarily develops as a result of absorption of toxic products in stasis. The severity of the symptoms varies with the degree of obstruction and the amount of retention of the duodenal contents. From the mild cases which may be characterized mainly by a sense of fullness after food and occasional sense of nausea, the symptoms may become so aggravated as to cause daily distress. Belching and bloating are more marked in these severe cases, and there is definite pain usually in the right upper quadrant, but occasionally over the left upper abdomen. It is thus easy to see how readily this condition may be confused with gallbladder disease. Disturbance with a large variety of foods is complained of, but there appears to be no similarity in the kind of

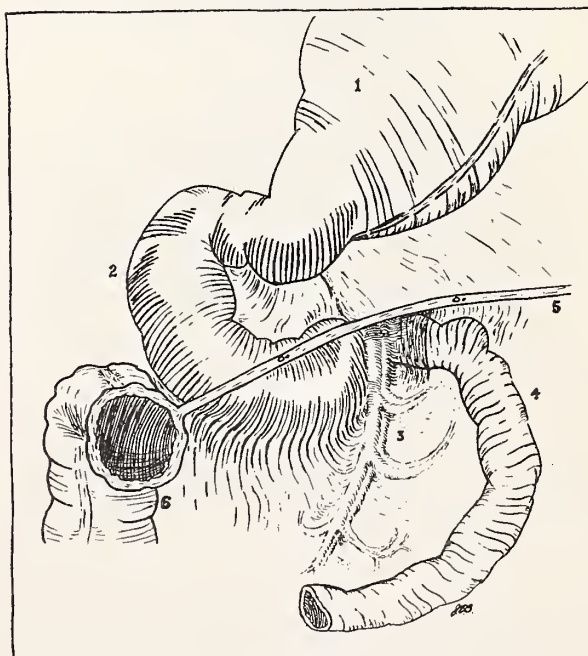


Figure 1
Drawing of Duodenal Compression by the Superior Mesenteric Vessels. Semi-diagrammatic.

1. Stomach.
2. Dilated Duodenum.
3. Superior Mesenteric Vessels.
4. Collapsed Jejunum beyond obstruction.
5. Cut Transverse Meso-colon.
6. Hepatic Flexure of large bowel.

foods among the patients. The most severe cases may have recurring attacks of nausea and vomiting. Frequently there is associated anorexia, headache, and loss of strength. The spells of distress appear to have a tendency to periodicity, recurring somewhat irregularly every four or five weeks. These patients are fairly comfortable in the intervals. Fluoroscopic and radiographic examinations will sometimes reveal the dilated duodenum during the stage of active symptoms, but this is frequently difficult to demonstrate. Most cases are diagnosed at operation.

CHOICE OF OPERATION

- a. Gastro-enterostomy has been advocated and performed, but the consensus of opinion is that it fails to produce the most satisfactory results.
- b. Resection of the right colon up to the mid-colic artery. This is essentially Bloodgood's procedure, and in his hands has given very good results. The purpose of this operation is to abolish permanently the constricting action on the duodeno-jejunal junction by the pull on the root of the mesentery.
- c. Devine's operation. This takes care of those cases where there is chronic dilatation of the duodenum without obstruction at its terminal end. Devine considers these cases as being probably due to an imbalanced or abnormal stimulation by the sympathetic nerve supply to the duodenum. Duodeno-jejunostomy does not help these cases and Devine does a pyloric exclusion operation through the middle of the stomach followed by an end to side gastro-jejunostomy through an opening in the transverse mesocolon.
- d. Duodeno-jejunostomy appears to be the favored operation by most surgeons. Curiously, this operation was first suggested by Dr. Bloodgood but has never been performed by him for this condition. Most surgeons feel that a duodeno-jejunostomy combined, when necessary, with colopexy of the right colon and plication of the giant cecum will accomplish all that the more radical resection of the right colon would do.

I have had two cases of duodenal ileus within the past year.

BLOATING AFTER MEALS

Case I—A young woman, school-teacher, aged 25, first presented herself in August 1926 with the following complaints:

1. Stomach trouble.
2. Anorexia.
3. Insomnia.
4. Nervousness.
5. Tendency to constipation.
6. Chronic backache.

She has been troubled with most of these for the last twelve years, but her indigestion has been her most predominant complaint. The most distressful symptoms were bloating and belching, which came on especially after meals. The belching spoiled her appetite and made her miss meals. She gave a wide variety of foods as being the

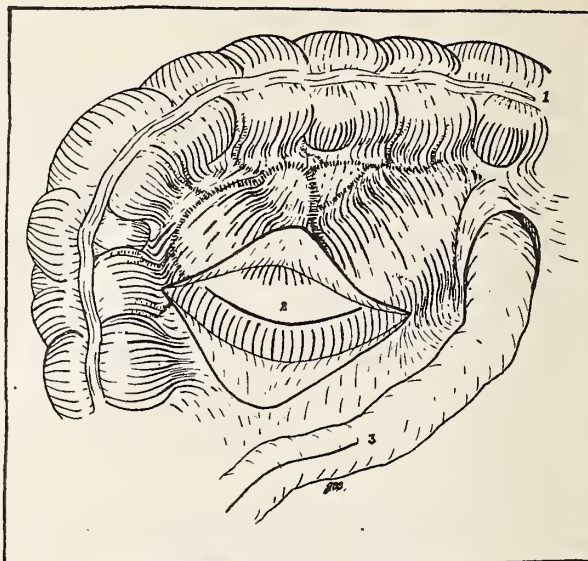


Figure 2

Location of incisions for Duodeno-Jejunostomy.

1. Transverse Colon.
2. Incision in exposed dilated Duodenum.
3. Incision in Jejunum.

cause of disturbance. Of these, meats, fat and fried foods, pastries and pies caused the most distress, and often caused sour or bitter eructations. In addition she had disturbances with all breads, especially white, while whole wheat bread was the least troublesome; also with corn, all canned vegetables, potatoes, eggs, lettuce, and carrots. There would be periods when any of these foods, and even those not mentioned, would give greater distress. Frequently, she would have an ache in the epigastrium which at times would be aggravated to the point of severe pain in the upper abdomen. She has never been jaundiced. She has been able to control the constipation for the most part by exercise and by the excess of vegetables and fruits in her diet. She would be continually harassed by a feeling of weakness, by a lack of "pep", by mental lethargy. There were no urinary disturbances, and no cardiorespiratory symptoms. Her usual weight was 120 pounds while her present weight was 113 pounds. Her menses began at 12. The family and past history are irrelevant to the case.

Physical Examination—General appearance—a medium built, somewhat undernourished young woman of decidedly dyspeptic facies. Head and sinuses—no evidence of pathology. Eyes, ears, throat—no evidence of disturbance or pathology. Nose—nasal obstruction on right from deviated septum. Neck—no enlarged glands. No goitre. Lungs—no dullness or rales. No post-tussic apical crepitations. Breasts—no masses or other pathology discoverable. Heart—not enlarged, sounds are clear, there are no murmurs. Blood pressure—systolic 122, diastolic 85. Abdomen—there is definite tenderness on pressure over the right upper quadrant especially during a deep inspiration. This was also present in the mid-epigastrium. There is tenderness over the right lower abdomen, but none elsewhere. No costo-vertebral tenderness. Nervous system—reflexes are hyperactive, but there are no abnormal findings to suggest organic nerve pathology. Pelvic examination—a complete retrodisplacement of the uterus was found. Rectum—no pathology palpable. The corpus uteri was felt resting on the rectum.

Laboratory Reports:

1. Urine—no pathologic findings.
 2. Blood—Kahn Pptn Test—Negative. Blood Count—R.B.C. 4,680,000, W.B.C. 9,400, Hem 70%.
 3. X-Ray of lungs—negative for tuberculosis.
- Diagnosis:
1. Chronic cholecystitis with possible associated appendicitis.
 2. Retrodisplacement of uterus.

The patient returned in December 1926, having decided to undergo an operation for relief.

TECHNIQUE OF OPERATION

The abdomen was opened through an upper right rectus incision. The bulging stomach was drawn aside and the gallbladder examined. It was found of normal size, bluish-white, movable, involved in no adhesions and containing no stones. The pelvic organs were examined and the uterus found retrodisplaced. The cecum, which was not enlarged, was drawn up and an elongated appendix removed. The cause of the indigestion evidently not being caused by the gallbladder, other causes were looked for. It was soon seen that the duodenum was dilated markedly above the normal. The duodenum was followed to the duodeno-jejunal junction. From this point the jejunum was seen to be collapsed. Elevation of the root of the mesentery caused gas to be propelled into the collapsed jejunum from the duodenum. This confirmed the presence and the cause of the dilatation, namely, pressure on the terminal duodenum by the superior mesenteric vessels at the root of the mesentery. The transverse mesocolon was kept reflected and an opening made on the right side to give access to the third portion of duodenum. Mobilization of the duodenum was found difficult until some congenital bands or adhesions on the right side were liberated. This portion of the duodenum was then brought through the opening in the mesentery, clamps applied to it and to an adjoining loop of jejunum about 5 inches from the junction. Liberation of the adhesions had given rise to a loss of peritoneal covering to a large part of the duodenum. Dependence was placed, however, on the adhesive properties of the jejunal peritoneal layer and a careful duodeno-jejunostomy was done. The edges of the opening of the mesocolon were attached to the duodenum proximal to the anastomosis. The loops of the jejunum on either side of the anastomosis were fixed by attachment to the adjacent mesocolon as further precaution against the formation of troublesome kinks. Gas was seen to pass from the duodenum through the anastomosis into the jejunum. The transverse mesocolon was brought over the anastomosis, the abdominal contents replaced and the abdomen closed.

Pathological Findings:

1. Subacute appendicitis. The mucus membrane showed hemorrhagic ecchymosis throughout the distal third of its length.
2. Chronic duodenal stasis.

Progress—The post-operative convalescence was practically uneventful. Two weeks later a Crossen-Gilliam suspension of the uterus was done. Patient noticed a marked improvement within a very short time. She ceased to be troubled with belching. Her appetite immediately improved. Foods that she thought would invariably cause indigestion were tolerated in a fashion that surprised the patient. During the

period of adjustment the patient increased the range of her diet very cautiously but as time went on new foods were gradually added until at the present time the patient partakes of a wide variety of foods, and positively enjoys her meals. During the past year it was necessary to give her treatments for a secondary anemia, but this has now improved. She has resumed her teaching duties with greater vigor and now weighs 123 pounds.

COMMENT

Two points are worthy of note in this case. First, the remarkable almost prompt relief from symptoms. It is practically a year since operation and progressive improvement is steadily observed as the patient discovers wider latitudes of dietary freedom. True, this is not always the case in conditions of this kind, but most observers report at least an improvement. Secondly, it will be observed that in the above case, the onset of the indigestion began at the age of puberty. It had not been present before that time but had progressively become more marked with advancing years. It is conceivable that in a few cases at least, the stimulus to growth manifesting itself at this period, would bring about a general enlargement of the abdominal structures, thus causing more compression of the terminal end of the duodenum by the superior mesenteric vessels in conjunction with a heavier drag on the root of the mesentery. It would seem logical to assume that there may be a relation between puberty and the development of chronic dilatation of the duodenum.

BELCHING PRESENTING SYMPTOMS

Case II—A young unmarried girl aged twenty-six, of rather dyspeptic facies, came in for investigation on November 28, 1927, with the general complaint of indigestion. She has had stomach trouble since 1920. This has been characterized chiefly by belching and bloating, but also by pain in the upper abdomen, nausea, heartburn, bitter eructations, and anorexia. This trouble has recurred off and on, but has been more troublesome for the past year. She has been particularly distressed in the last few months. The belching would come on at all hours and would be irrespective of the kind of food or the time of meals. Even water would induce belching, which would last for hours. Her pain was located in the right upper abdomen and in the mid-epigastrium, the latter being somewhat relieved by belching. She has been afraid to eat because of belching. She has never been jaundiced.

The physical examination elicited tenderness on pressure over the right upper abdomen, especially during deep inspiration. There was also a suggestion of a deep resistance or a mass in the right upper quadrant. The diagnosis of chronic duodenal ileus or chronic cholecystitis was made.

Operation revealed a large inflated bulging stomach and a patulous pylorus. The duodenum was not readily visible as it was bound down by peritoneal folds which involved it and the gall-

bladder and the duodenum itself seemed to dip posteriorly out of sight. The gallbladder was bluish-white, thin-walled, emptied easily on pressure, contained no stones, and was apparently normal. The transverse mesocolon was elevated and reflected and the jejunum was seen to be inflated. The dilated jejunum was quickly followed and a point was reached about seven to eight inches beyond the junction where the bowel was found collapsed. There was no obstruction at this point and the supposition was that in elevating the mesocolon the obstruction by the structures in the root of the mesentery, was momentarily relieved and allowed the escape of gas into the jejunum from the duodenum. The dilated duodenum could only be seen when an opening was made in the mesocolon to expose the third portion. A duodeno-jejunostomy was done.

Sufficient time has not elapsed to judge the ultimate results in this case, but at this time, eight weeks after the operation, on a fairly general diet, she appears to have gotten rid of her most troublesome symptom, belching.

The fact that in such a moderate surgical practice as mine, I have been able to unearth two of these cases within one year, would seem to suggest that this condition is not as infrequent as some recent writers* would indicate.

* Bloom, A. R. and Arenz R. A. Duodenal Stasis. J.A.M.A. Oct. 15, 1927.

SUMMARY

1. The anatomy of the duodenum is reviewed and possible causes of duodenal obstruction outlined.

2. Chronic duodenal ileus is a clinical entity by no means infrequent, and its incidence varies in direct proportion to the observation of the surgeon.

3. The symptoms closely resemble those of chronic cholecystitis and it may be difficult to differentiate the two.

4. Duodeno-jejunostomy in conjunction, when necessary, with colopexy and plication of giant cecum, is the most favored operation.

5. Two cases of chronic dilatation of the duodenum are presented.

6. The changes occurring as a result of puberty are suggested as an etiologic factor in the development of some cases of chronic duodenal ileus.

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SYMPOSIUM ON TUBERCULOSIS*

THE RECEIVING HOSPITAL STAFF

DETROIT, MICHIGAN

OCULAR TUBERCULOSIS

EDGAR E. POOS, M.D.

Ocular tuberculosis may be divided into primary tuberculosis, which is exceedingly rare, and the secondary type, which is more common. It can also be divided into the acute, in which belong the cases of solitary tubercle of the eye, diffuse tuberculosis of the choroid, acute tuberculous iritis. These cases run a relatively rapid and malignant course, loss of the eye and often death of the patient ensuing. The lesions do not differ from active tuberculous lesions elsewhere in the body, and there is no doubt that they result from direct blood metastasis. To this type belongs also miliary tuberculosis of the choroid which is usually a terminal manifestation of the systemic disease. To the chronic type of ocular tuberculosis belong the far more frequent cases of tuberculous sclerites, keratitis, chronic iritis and cyclitis. (Verhoeff). These cases run an extremely slow course, are almost never fatal, and healing ultimately occurs, followed by frequent recurrences.

Therefore I will take up some of the characteristic lesions of tuberculosis of the eye.

SCROFULOUS LID ULCERS

Scrofulous ulcers develop generally as a result of caries of the orbital margin and like those that originate in suppurations of lymph glands, present an irregular shape and reddened or livid borders, either take a long time to heal or keep constantly recurring and in their later stages are distinctly puckered, often causing a disfiguring scar which is adherent to the base and produces ectropion.

Lupus also occurs on the lids with its characteristic nodules or scars.

TUBERCULOUS CONJUNCTIVA RARE

Tuberculosis of the conjunctiva is a rare affection. Eyre having met it in eight out of twenty-five thousand new ophthalmic cases in London. It may be primary,

* The subject of Tuberculosis was discussed in its various phases at the regular meeting of the Receiving Hospital, Detroit, February 8, 1928. The following pages include a summary report of the discussions by various members of the staff. Dr. David Clark, chief of the staff, presided. The Receiving Hospital is the City Hospital of Detroit and the teaching hospital in connection with the Detroit College of Medicine and Surgery. The capacity is 596 beds. The staff is composed of physicians and surgeons who are also on the attending and consulting staffs of a majority of the other hospitals of the city.

but generally secondary to nasal or laryngeal tuberculosis. Females are affected slightly more than males. Palpebral conjunctiva is more often the seat of the lesion than the bulbar. Lower lid more often than the upper. The cornea often is the seat of superficial inflammation. Iritis may develop and while the preauricular gland on affected side is hard, swollen and tender, it does not often suppurate. The submaxillary and cervical glands may be infiltrated.

Sattler gives the clinical features as follows: first group characterized by small miliary ulcers, which may coalesce, generally attacking the palpebral, but sometimes affecting the bulbar conjunctiva: second group, characterized by grayish or yellowish subconjunctival nodules, varying in size, but rarely larger than a hempseed: third group, characterized by florid, hypertrophied papillae and rounded outgrowths of granulation tissue, springing from the palpebral conjunctiva or situated in the fornices, recurring after removal and accompanied by edema and thickening of the lids: fourth group, "lupus" of the conjunctiva characterized by numerous pedunculated cockscomb-like excrescences in the fornices of a jelly-like consistency often showing more or less ulceration. To these, Eyre adds another group to cover those cases characterized by distinctly pedunculated tumors, microscopically resembling papillomata, cases without involvement of the subconjunctival tissue, or production of any symptoms other than mechanical ones. Pain, as a rule, is not a prominent symptom. A moderate discharge is present.

Stephenson has cured one case by X-ray treatment. If this means fails, early and complete removal of the diseased conjunctival tissue and enucleation of swollen preauricular glands should be undertaken. After removal of tissue Aristol or Iodoform are to be applied.

LACRIMAL GLAND INVOLVEMENT

Tuberculosis of the lacrimal gland has been described by Doctors Lapersonne, L. Muller, Baas, Salzer and Suskind.

The clinical features are the presence of a hard tumor, about the size of an almond, situated at the upper and outer part of the orbit. The tumor is movable and is not adherent to the skin. In one half of the cases the growth was rapid, two or three months, and suggested sarcoma. In the other half of the cases the disease pro-

gressed slowly, three to four years. In only one case was pain present, at the beginning. In three cases the skin over the tumor was red and swollen; nearly all the cases showed tuberculosis elsewhere. Often there is an associated swelling of the parotid gland on the same side. The movement of the eye was not limited. It is evident that the nature of the tumor in these cases can be determined only after removal.

Microscopic examination shows typical miliary or submiliary tubercles, with more or less round cell infiltration. The tubercle bacillus was found in less than half the reported cases. Thus far caseation has not been reported. Surgical intervention will be in order only after medical and hygienic measures fail.

INCIDENCE CORNEAL TUBERCULOSIS

About one in ten of interstitial keratitis cases are due to tuberculosis. In keratitis profunda cases tuberculosis is characterized by a gray opacity of the cornea situated in the middle and deep layers of the cornea, over which the corneal surface is gray and punctate but not depressed. Seen with the naked eye, the opacity looks uniformly gray, while with the magnifying glass it may be resolved into dots and maculae without ulceration. Attacks adults in one eye, lasts four to eight weeks, but may recur. These cases are often tubercular in origin.

Sclerosing keratitis often accompanies a scleritis, if a scleritic nodule is situated near the margin of the cornea there develops in the adjacent portion of the latter an opacity which is situated in the deeper layers. Vascularization is slight, it heals without ulceration, the greater part of the opacity remains permanently and ultimately becomes bluish white like the adjacent sclera, usually attacks young females.

In a great number of patients with phlyctenular conjunctivitis keratitis there are changes which are certainly tuberculous, often appearing as scrofulous lesions of glands, bones and often pulmonary tuberculosis. But, even if showing no active process, often have a latent one. If then the phlyctenules are not actual tubercular nodules and yet on the other hand they occur with such preponderating frequency in tuberculous subjects we should not be far out in explaining them as being due to the action of toxic substances in the same way as for example nodules develop in tuberculous individuals

after rubbing tuberculin ointment in the skin (Moro).

According to Verhoeff, they are probably due to anaphylaxis in tubercular subjects.

IRIS TUBERCULOUS TREATMENT

When tuberculosis of the iris assumes the solitary form, iritis may be absent for considerable time. Such cases were described by Von Graefe under the name of granuloma of the iris.

The tubercular nature of such growths was first demonstrated by Haab. Tubercle is generally found between the fourth and the twenty-first years, while sarcoma occurs in later life. The history of the case and the finding of tubercular foci elsewhere will aid in diagnosis. Tubercle is more rapid in growth (Andrew).

In any case of solitary mass in the iris antisyphilitic treatment should be instituted. If this fails the mass should be excised by iridectomy and examined microscopically. It may be necessary to enucleate the eye.

There may be cases without tuberculous nodules, but should be regarded as tuberculous, often marked by the presence of large lardaceous looking deposits or masses which appear to grow out from the sinus of the chamber. You may see very minute grayish nodules with the higher powers of the corneal microscope.

CHOROID PROBLEM IN DIAGNOSIS

Tuberculous lesions of the choroid, viewed by the direct method, are not so contrastive. Light fawn colored objects, they gradually merge into the red reflex, covering them is a stipple of fine retinal pigment granules (Stephenson). Tubercles resemble the spots seen in disseminated choroiditis when multiple, the common number is two or three. The tubercles in this form of the disease appear a few days or weeks before death: hence, they cannot be mistaken for the elevations of disseminated choroiditis. They begin in the deeper layers of the choroid, growing from the adventitia of the vessels. They do not affect the vision. In many cases they can be demonstrated by microscopic section in the eyes which present no changes to the ophthalmoscope. In probably 80 per cent of cases of military tuberculosis their presence can be demonstrated post mortem. According to Carpenter and Stephenson, they are found ophthalmoscopically in 50 per cent of cases of military tuberculosis, and tuberculous meningitis

and in 10 per cent of cases of chronic (surgical) tuberculosis. The presence of tubercle bacilli cannot always be demonstrated in the cases. The larger tubercles show giant cells with a reticulum of fibres, epithelioid cells, small cell infiltration and caseation.

The smaller growths are collections of lymphoid cells situated between the vessels.

RETINA

Tuberculosis of the retina probably is of more frequent occurrence than would be indicated by the fact that less than forty cases are on record. The earliest ophthalmological signs concern the retinal vessels, and more often a vein than an artery is involved (Jackson). The earlier accounts dealt chiefly with large tuberculous masses or tuberculomas, diagnosis being made after removal of eye for intra ocular tumor. Spencer states that hemorrhage with or without reduction in vision (depending on part of retina involved) often is the first evidence of retinal tuberculosis. They are usually multiple pin point in size or massive, often in young adults being the only evidence of tuberculosis.

According to Jackson, the first visible changes are often found in the periphery of the fundus, and in some cases are preceded by tuberculous lesions of the anterior segment of the eye.

If recognized in an early stage, rounded masses of whitish exudate are seen in the retina or in the vitreous humor near the retina. These masses are associated with the retinal vessels, most frequently the veins, varying in diameter from 1/10 to that of the optic disc, the vessel on both sides of the mass appearing normal. Later the vessel involved, or a limited part of it, may become widely dilated, and the masses may become quite pink or red with new formed vessels. During this stage hemorrhages occur, may be small and flame shaped or massive, breaking into the vitreous and causing blindness. Hemorrhages, whether small or large, slowly undergo absorption, clearing up in course of weeks or months, the larger ones often leaving vitreous opacities and retinitis proliferans. They have a tendency to recur.

SCLERA TUBERCULOSIS COMMON

Tuberculosis of the sclera is more common than it is thought to be, appearing as more or less definite nodules, later as heal-occurs it assumes more of the diffuse form. The nodules of scleritis hardly merit the

name, since they most often appear simply as elevated areas in the sclera. They usually reach a considerable size and are situated at some distance from the cornea, most often, perhaps, where the anterior perforating vessels enter the globe. Sometimes there are also small nodules which are situated beneath the conjunctiva and form the centers of small congested areas, varying in size from one to several millimeters in size. They sometimes occur near the limbus simulating phlyctenules. They have a tendency to disappear and reappear within a short period of time.

These nodules have been examined by Verhoeff, and showed that the essential lesion was a focal proliferation of endothelial cells, among which an occasional giant cell occurred, surrounded by an infiltration of lymphoid and plasma cells.

The vessels in the neighborhood showed perivascular infiltration with chronic inflammatory cells and the subepithelial tissue showed a similar infiltration in a greater or less degree.

Caseation was entirely absent. These cases generally accompanied a keratitis, characterized by a deep infiltration of the cornea usually, but not always, extending out from the sclera on the affected side, which showed one or more punctate areas of greater density. The variation in the density of the diffuse infiltration was always more apparent than in that of the punctate areas.

The scleritis generally clears up before the keratitis. New vessels were slow to make their way into the cornea, and the vascularization was always insignificant when compared to the density of the opacity or to the amount of inflammatory reaction.

These cases are found most often in females, average age about 25, and are aggravated during the menstrual period. Similar cases of scleritis have been reported by Wagner, Von Hippel, Czermaks and Sattler's discussion of Von Hippel's paper, Vassius and Fuchs in his text book.

OPTIC NERVE INVOLVEMENT

We may have an optic neuritis as a result of tuberculous meningitis or the result of a general tuberculosis.

In rare cases a conglobate tubercle occupies the disc, transforming it into a white, shining, smooth or nodular tumor which is considerably larger than the normal disc and projects far into vitreous; small white foci may be present in the ad-

joining retina. Sight is comparatively good and improves under tuberculin treatment which also causes subsidence of the swelling until nothing is left but a thin connective tissue layer (Salzman).

TREATMENT WITH TUBERCULIN

The basis for the use of tuberculin in various forms of tuberculosis, in which we include scrofulosis, rests on three factors. The ocular findings with consideration of the pathologico-anatomic type, general findings, and type of immunity.

If, with Ranke, we consider tuberculosis to be a general disease, involving the whole body and not an individual organ, we must distinguish three characteristic stages of development. The primary tuberculid, to which belong the youthful early forms, tubercle of iris with tubercle formations. The typical secondary forms of the period of hypersensitiveness in which the acute inflammation is the most prominent symptom (according to Schiek, periphlebitic process in the retina, diffuse iritis and iridocyclitis, and anaphylactic scrofulous forms), and third, the late forms, especially iris tuberculosis with frequent recurrences and vitreal opacities, where a partial immunity has developed. To these three forms correspond the different actions of tuberculin, normal sensitiveness to the toxin in the first, therefore expecting the best results in this form, in the second hypersensitiveness where it is less beneficial and may be deleterious, often foreign protein therapy acting better, and third, in which we have partial immunity, may expect better results.

In general, one should begin with small doses and increase them, that is, begin with 0.001 mg. old tuberculin, increasing slowly up to 1 mg., not going above 5 to 10 mg., if pulmonary tuberculosis is present. After a cure is obtained, patient should be treated with small doses $\frac{1}{2}$ to 1 mg. every two or three weeks.

General hygienic treatment should be given, rest, proper food, sunlight, ultra violet radiations, cod liver oil and Fowler's solution.

SUMMARY

Ocular tuberculosis occurs more frequently than has been suspected.

Tuberculin is of great value in the diagnosis and treatment, but general hygienic measures should not be neglected.

Ocular tuberculosis often occurs without symptoms of tuberculosis elsewhere in the body.

It is especially common in the later stages of acute miliary tuberculosis.

NOTE: This paper was illustrated by lantern slide photographs.

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DISCUSSION BY DR. RALPH H. PINO

After listening to this paper Dr. Poos, I am impressed with the technical importance of it to the ophthalmologists, realizing, however, that much of the detail is of only relative interest to the other members at this Staff Meeting.

First relative to the pathology: we note from this paper that tuberculosis involving the eye can be a process of a single part of the eye such as the cornea, or it can involve the whole of the eye with complete destruction. We note also that there are many cases where there is very evident tuberculosis involvement in the form of a keratitis which responds to treatment very well and apparently gets entirely well. Having in mind that tuberculosis involves any or all tissues of the body and that post-mortem findings reveal a former tubercular involvement in the majority of cases, we arrive at the conclusion that in the vast majority of people that tuberculosis has been present and has healed, spontaneously or with treatment, and with or without the patients ever knowing that they had it.

Since this is the case, I believe that there is something to be learned from the therapeutic findings in tuberculosis of the eye in this respect. Among the most spectacular results in some of the inflammatory conditions of the eye, we find that it obtains in the use of tuberculin, starting with very minute quantities of it, as low as 1/150,000 of a milligramme, when injected intermuscularly, will produce an inflammatory involvement of the eye. Where this is the case, where every other factor

has been ruled out from the standpoint of diagnosis, we often find that the patient responds remarkably and apparently becomes entirely cured of such a lesion by being treated with tuberculin: which raises this question, and it is the one of most importance in a general way, and I think should receive the attention especially of the internists—to the point that possibly there are many cases where treatment by tuberculin would solve some undiagnosed conditions. I would use as an example an arthritis. We know that tuberculosis involves the joints at times. Now, have we not cases where a patient will come in complaining of rheumatism, the etiology of which, we are entirely unable to find? It may involve only one joint and may last for a long time. My suggestion would be that in view of our experience with tuberculin in some of these eye lesions, which are so located that we can see them and watch their progress, that if a patient comes in with an arthritis, in which the etiology cannot be found, that all the tests be made relative to the possibility of trying tuberculin, and if it seems feasible, to try it out, beginning with small doses. Possibly we will find some of these obscure things cleared in this way, and what would apply to an involvement of the joints, might apply to other cases where only a small defect is noted.

RENAL TUBERCULOSIS

W. E. KEANE; M. D.

Mrs. N. P.—Age 44 and white. Married. On entrance she stated she had always been in good health until present illness. Married 24 years, husband living and well, had seven children. Her symptoms were frequency, nocturia, pain in back, with some pain on urination. The illness began about a month and a half ago. At this time she urinated every three hours during the night and about every hour during the day. She noticed a burning sensation upon urination—no Hematuria or Oedema. She had a visceroptosis and has considerable pain on deep pressure on the right side. She was cystoscoped and the bladder capacity was found to be 225 c.c. The bladder mucosa showed a marked degree of cystitis. The right ureteral orifice was of the golf ball type and the left appeared normal. No. 6 French catheter passed on left side to pelvis of kidney meeting no obstruction, a No. 5 French catheter met an obstruction about 3 inches from the right ureteral orifice. The urine flow from right kidney was constant, and the flow from the left side was slightly below normal. The dye appeared in four minutes on the left and six minutes on the right. After a pyelogram was taken we were under the impression that we were dealing with a hydronephrosis of the right side with possible stone in pelvis or ureter. Repeated tuberculosis tests were negative. She was again cystoscoped one week

later and her intravenous phthalein test was checked again. The appearance time on right side was four minutes and on left four and one-half minutes. The flow from left side was rather slow and intermittent, that from right side appeared to continue to flow as is seen in hydronephrosis.



Right Pyelogram, Renal Tuberculosis

At the end of the ten minute interval bladder drain and no phthalein found in bladder. A right pyelogram was made after 25 c.c. of opaque fluid was injected into the right side without giving any discomfort.

N. P.—A Nephrectomy was done and the kidney which showed definite evidence of hydronephrosis with tuberculous abscesses in several of the kidney calices.

Mrs. M. M.—Aged 33 and white. This patient gave no history of operation, serious illness or injury. Two years ago, she said she had bleeding from the bladder which lasted but one day. The last symptom of bleeding she said began February 23rd.

Cystoscopic examination done at this time showed a bladder of average size. The right ureter was slightly enlarged and an area of congestion surrounded the right orifice that bled easily, from granulation. Catheters were introduced on both sides full length and no obstruction was met with. The drip from the left side was observed to be about twice the normal amount and was clear. The appearance of the left ureteral orifice was entirely normal and the observation was made at this time because of the findings, that tuberculosis of the right kidney should be ruled out by further study. One week later catheters were again introduced, and the urine again taken from the left side, which was found to be entirely normal and free from tubercle bacilli.

The urine from right side was scanty and of a

cloudy watery appearance. The dye appeared in 5 minutes on the left and in 25 minutes on the right side. Microscopic analysis showed tubercle bacilli in large numbers from right side. A pyelogram was made of right kidney and the findings confirmed tuberculosis. A nephrectomy was done with prompt improvement of all symptoms.

Pathological section was made of right kidney which showed a typical tuberculous kidney.

Alfred S.—Aged 30 years. Patient was first seen on April 4, 1927.

Patient had been under care for a considerable time for the relief of frequency and burning on urination.

Past History—Patient had G. C. in 1917, while in the army. Had a "sore" and a small abscess on the foreskin at the same time. Repeated blood Wassermanns were negative.

Present History—Has had "neuritis" for the past two years. Several teeth were removed after X-ray examination. Has pain in the left hip and lumbar region and leg.

Symptoms of frequency and burning of urination and backache.

Observation—Lost 14 pounds in the last year. Wassermann negative. Both first and second tubes of urine are slightly clouded and contain pus. Prostate is small in both lobes and there are no nodulations. Vesicle not palpable. Testicles and epididymis show no pathology.

Cystoscopic examination April 12, 1927. This demonstrated the bladder to be of average size with moderate trabeculations, right ureter easily found and entered full length with a No. 6 catheter. Gross appearance of the urine from this time was normal. In the region of the left



Pyelogram, Renal Tuberculosis

ureteral orifice there is a semi-solid growth which was not suggestive of a malignancy but should be rechecked and the left kidney catheterized, as it was impossible at this examination to introduce any type of catheter into the left ureteral orifice.

Patient's bladder again examined May 8, 1927.



Left Pyelogram. Hydronephrosis which proved to be Tuberculosis.

At this time the growth previously noted in the left ureteral orifice, was examined and apparently was unchanged. Attempts were unsuccessful to introduce a catheter into the left side, and patient was again seen on the following June 10, 1927, at which time both specimens of urine were fairly clear. On September 10, 1927, a cystoscopy was again done with the injection of Indigocarmin dye, and, while the appearance time on the right side was about four minutes,

there was no dye appearance from the left kidney after thirty minutes.

Patient was admitted to Receiving hospital in December 1927, and a catheter was introduced into the left side, by Dr. Ames. After 30 c.c. of sodium iodid was introduced, a pyelogram was taken. One week later a pyelogram was done on the right side, which appeared to be normal. A pyelogram of the left side showed a large hydronephrotic kidney, the ureter and several of the calices outlined what suggested a chronic inflammation. A dye test done before the pyelogram was made showed the phthalein appearance time was 7 minutes on the left and four minutes on the right. Repeated specimens had been stained but no tubercle bacilli were found. N. P. N. was normal.

Because of the X-Ray findings, and his continuous pain resulting in the loss of over half time at his work, it was deemed advisable that the kidney should be removed. Accordingly a left nephrectomy was done on January 26, 1928.

Pathological examination showed positive evidence of a tuberculous kidney.

These cases present examples of the ease and difficulty in diagnosis of tuberculosis of the kidney. The diagnosis of renal tuberculosis and the presence of tubercle bacilli in an acid urine, frequent and painful urination pyuria, hematuria, pain in the kidney region, confirming dye test and suggestive pyelograms, is a very easy matter, but all of these symptoms may be lacking and its detection correspondingly difficult.

In the case of male patient A. S.—Cystoscopic examination was done at least six times before we were able to introduce a catheter into the left ureteral orifice—at the first examination the bladder appeared normal, except the region about the left ureteral orifice. There was a granuloma which suggested new growth, and which presented an obstacle in diagnosis that Braasch has called attention to in a recent article on this subject. This granuloma gave the appearance of an epithelioma of the mucous membrane in the area about the left ureter, and was even fulgurated, at one examination, in the hope of aiding entrance on this side.

The pyelogram of this kidney suggested rather hydronephrosis than tuberculosis. But we are finding, with more careful study, that many times these two conditions exist simultaneously. No tubercle bacilli were found notwithstanding the presence of tuberculous infection in this kidney, and hence we did not make a positive diagnosis before operation was done.

The dye test done on this patient at different times showed an appearance time of five minutes on the left side, and this again rather led us away from diagnosing



Bilateral Renal Calculi—Left Pyelogram, Questionable Renal Tuberculosis.

tuberculosis. Wildbolz, Marion and Laguen stress the diagnostic value of kidney function with early as well as late renal tuberculosis. Wildbolz does not consider a few white blood cells pathognomonic of renal tuberculosis unless associated with diminished function. However, there are numerous cases reported with normal or even slightly increased function in the face of renal tuberculosis.

We believe that sacral anesthesia is a definite aid in doing cystoscopy and introducing ureteral catheters in patients with tuberculosis of the urinary tract. We believe that in this patient our success in entering the left ureter after several failures was due to the use of sacral anesthesia. We would recommend it for use in similar cases.

Improved X-ray apparatus has increased its value tremendously and we are able to find confirming evidence with many characteristic pyelograms. Calcification forming shadows is usually a late process but pyelograms may mean a distinct help when tubercle bacilli are not found in the urine.

We have in these cases presented the moth-eaten appearance of the pelvis and calices and an irregularity in outline.

We also have an example of dilatation of the pelvis and ureter as result of stricture. We also call attention to one case with the so-called "putty-like" masses and which generally suggest renal tuberculosis.

Two slides are also presented of a patient 35 years old who shows with X-ray and pyelogram two massive kidney shadows with large number of calculi and definite evidence of hydronephrosis. This patient is still under observation and because of the bilateral involvement we are in no hurry to attempt a radical treatment. He works every day and his only complaint is a slight back-ache and that he tires late in the afternoon. No tubercle bacilli has been found, but we feel rather inclined to suspect a tuberculosis may complicate this bilateral involvement.

DISCUSSION ON PAPER OF DR.

WM. E. KEANE,

R. E. CUMMING, M. D.

The diagnosis of renal tuberculosis still constitutes one of our biggest urological problems. Dr. Keane has amply illustrated this by his series of case histories and pyelograms; even after extensive investi-

gations including six cystoscopic examinations, in one instance, the diagnosis could not be made. Adversely, the kidney, known diseased, appeared tuberculous at operation and on section disclosed a most typical picture of advanced tuberculous pyonephrosis. The associated hydronephrosis is rather rare as I have previously indicated in an extensive study, but with the combined lesion, one expects to find the invading organism more readily, due to free access to the pelvis and good drainage. In Dr. Keane's case, the pelvis was drained only once suggesting a possible explanation of the failure to find tubercle bacilli. Another explanation in this type of case is secondary infection, overshadowing the tuberculous and more chronic involvement.

In contrast to such advanced disease as that in the kidney described, Dr. Keane showed pyelograms of two cases, which he considered typical of tuberculosis; in each case tubercle bacilli had been found and with a clear diagnosis the indication for nephrectomy was obvious. I cannot agree that the films were typical of tuberculosis; they proved pathology, but were no more indicative of an acid-fast infection than of some other type. The X-ray findings may be normal with renal changes and specific bacilluria: they may show complete calcification shadows; the variation between is wide and there is no typical set of renal pelvic changes that are positively diagnostic.

Our renal function tests also are difficult to interpret in renal tuberculosis; not only is this true because of the frequency of secondary infection, but also because of the tendency to localization of the lesion, a large area of functioning tissue remaining. Therefore wide variations in dye percentage are found and no rules of guidance are possible.

Finally, a word relative to laboratory tests; it is still considered likely that tubercle bacilli are filtered through the kidney as are other bacteria. Again, other bacteria obscure the suspected type in mixed infections, and lastly, due to lesions remote from the pelvis, there may be no passage downward of the organisms, or only occasional "showers." The present-day animal inoculation test is notoriously inaccurate and where positive, has often been preceded by a diagnosis with other means and operative attack. We have been conducting experiments of our own and repeating those of others over a period of seven years in an attempt to arrive at some method for quick and accurate

animal tests, and are hopeful of establishing such a procedure in the future.

PULMONARY TUBERCULOSIS

DOUGLAS DONALD, M.D.

Case Report—A. F.—Female, age 31, white.

Comes in complaining of a cough for the past two months. Anorexia. Coughed up a pint of blood. Onset November 10, 1927 at which time she was in a run-down condition because of household cares. At this time she developed a cold persisting to the present time, and accompanied by sputum. December 24, 1927 she coughed up a small clot of blood in a handkerchief. Has become weaker and lost nine pounds in weight. Denies night sweats. December 27, 1927, she coughed up a pint of bright red blood which was diagnosed by her physician as being caused by an abscessed tooth. January 13, 1928, had another hemorrhage, which time she claims to have coughed up a quart of blood. Hoarse since onset losing her voice completely at times. Denies any evidence of tuberculosis in her husband, children or family. Amenorrhea since October 4th.

On physical examination sallow appearance, marked hoarseness, mucous membranes pale. Poorly developed with evidence of recent loss of weight. Poorly nourished, skin dry and somewhat scaly. Cervical glands palpable with a somewhat matted percussion of left apex ant. and post. Tactile fremitus somewhat increased. Crepitant and moist rales over the left apex. Voice sounds increased. Breathing of the tubular type at level of second inner space ant. Evidence of a cavity second inner space ant. Laryngoscopic examination shows edema of the arytenoid. No ulceration. Sluggish movement of cords. Impression:—Early tuberculosis of larynx.

X-Ray, January 14, 1928—Infiltration of the entire left lung with cavity at left apex. Marked retraction of heart to the left, due to a productive type of lesion. Urine negative. Blood—R.B.C.—3,800,000. W.B.C.—5,800. Polys—78%. Lympho.—21%. Wassermann and Kahn negative. Sputum was positive on five occasions with many bacilli.

Temperature shows afternoon rise varying between 103 and 98 with the pulse in proportion to the temperature varying between 74 and 120. Respirations 20. Blood pressure 118/60.

This patient presents the picture of advanced pulmonary tuberculosis with early laryngeal involvement, and from the point of view of diagnosis presents no difficulty. There is a history of cough, loss of weight and three attacks of hemoptysis, one of which you will note was stated by a doctor to be due to an abscessed tooth. Such a diagnosis as this should help us remember the old aphorism that all hemoptysis must be considered as due to tuberculosis until proven otherwise. To dismiss this case of hemorrhage as being due to an abscessed tooth was nothing short of criminal. The physical findings and X-ray confirm the impression we must get from the history. There is evidence of advanced

tuberculosis in the left lung with cavity formation, and beginning changes on the right side. There is oedema of the arytenoid, there is a hectic type of temperature and a secondary anemia. The sputum contains many tubercle bacilli. Unfortunately, such cases as this are seen frequently in the Receiving hospital and their stay here, as a rule, is far too long for their good. We average about 16 tuberculosis patients on the wards and have had as many as 30 at a time. They stay for months. The reason for this is, of course, the congested condition of the State and City sanitariums. I do not say County sanitariums, because Wayne county has no tuberculous sanitarium. A general hospital of this kind is in no way fitted to provide the proper environment for rest, fresh air, nor the proper diet. Many of these patients, were the home conditions proper, would do better at home, and this leads me to the feeling that in our private practice we are far too liable, once the diagnosis of tuberculosis has been made, to make arrangement for sanitarium care and not give the patient proper attention while at home. Many of these patients do not need sanitarium care, and, in fact, will do better under home surroundings granted that the home conditions are proper. Of course, if there are young children under five about the house, the sanitarium care is indicated, in order to protect the children. Even if it is decided that a stay in a sanitarium is advisable, much valuable time for the patient may be gained by instituting proper home treatment before admission to the sanitarium.

CONTRIBUTION OF RADIOLOGIST

J. C. KENNING, M. D.

As I am only allowed a few minutes for this discussion in regard to radiographic examination of the chest in adults, I do not think it necessary to say anything regarding the relative value of the examination, as its value as a diagnostic factor is well established at this time. It might be well, first, to state that the pulmonary markings are due to the fluid content of the artery, vein, and lymph channel, and their structure plus that of the bronchus. These markings are apparent in the radiograph and extend slightly beyond the mid-clavicular line of the chest in a plate we consider to be normal. The illumination is in direct proportion to the air content of the lung, and these are the two basic factors of the roentgenologic interpreta-

tion. Each case should be fluoroscoped and viewed at all angles. The technique of taking the films will not be touched upon, except to say that it must be a proper one, and the films of constant character obtained with the finest detail possible. Increased markings of both lungs is invariably the result of a cardiac lesion.

Incipient tuberculosis in a radiograph is first shown by several small irregular shadows with a hazy border in the peripheral portion of the lung field, usually in the second or third interspace. This plate demonstrates what we consider to be an early lesion. You are all, no doubt, aware that we divide tuberculosis into the productive and exudative types naming the most predominant lesion, if both are present. Now the area of infiltration must be at least 4 millimeters in diameter to cast a shadow on the radiograph, and it is our experience that when tuberculosis produces clinical symptoms we are usually able to demonstrate it in a film of the chest.

This film which I am showing you is one of an exudative process in the upper right lobe. You notice the opacity is homogeneous, which is really a pneumonic process, but tubercular in character with small areas of infiltration extending to the apex.

On the other hand, here is a film showing a typical productive type of lesion and has a marked fibrous tissue production. The tubercles themselves may be surrounded by fibrous tissue in a productive lesion and, of course, the prognosis is always better in this type. We will now show you a film of the exudative type of tuberculosis involving the middle right lobe and part of the lower right with cavity formation, but the apices are uninvolved.

Next I wish to show you a case in which you will notice there is a marked enlargement of the entire cardiac shadow, and with the fluoroscope the pulsations are hardly discernible. You will notice the infiltration throughout both lungs, it being slightly increased in the second and third right interspace. This was miliary tuberculosis even though there was apparently a marked cardiac enlargement. The clinician reported the heart sounds distant, and suspected pericardial effusion, but we consider the cardiac enlargement to be due to a marked thickening of the pericardium, and not to a pericarditis with effusion, principally on account of the practically absent pulsations, distant heart sounds, and no valvular disease. Serial radio-

graphs showed a marked progress of the miliary process involving both lungs, and at autopsy our above conclusions were found to be correct.

I feel that the roentgenologist should be the clinician's consultant, as all of you realize the extreme difficulty in the interpretation of films of the chest. No matter how sure you feel of your roentgen diagnosis, there should be a correlation of the history, clinical and physical findings, and the radiographic interpretation. I wish to say here that we have ward rounds with the clinicians on the medical service; the clinician presenting his side of the case, and we the X-ray findings. This procedure has been of much value to me and I hope, also, to the clinician.

TUBERCULOSIS LESIONS

OSBORNE A. BRINES, M.D.

Pathologist, City of Detroit Receiving Hospital

As a rule we are not greatly interested in statistical data, but when they are collected in our own hospital on material that has passed before our eyes, they become intensely interesting. The following figures have been derived from an analysis of the last 500 autopsies at this hospital: 135 cases, or 27 per cent showed frank active tuberculosis. Routine autopsy technique only was employed and no special effort was made to detect tuberculosis. Many cases with small healed tubercles in lung tissue were not included.

Only in 4 cases, or 3 per cent, was there no pulmonary tuberculous lesion: in one of these 4 cases the liver was involved, in another only the mesenteric lymph glands and in still another there was tuberculous meningitis with no other demonstrable acid fast infection. In the fourth case both spleen and liver contained tubercles, but other organs, as far as could be ascertained, were free.

The 131 cases showing lung tuberculosis were subdivided into 2 groups: major and minor; the major being those cases where tuberculosis was the predominating pathology and the minor where the principal pathology was another type of lesion. There were 102 major and 29 minor cases of pulmonary tuberculosis.

In the 102 major cases of lung tuberculosis the following organs or structures were involved as below shown: Liver in 50 cases; spleen in 46 cases; kidneys in 28 cases; peritoneum in 17 cases; intestines in 12 cases; adrenals in 10 cases; brain in

7 cases; genito-urinary tract in 5 cases; pericardium, 3 cases; appendix, 3 cases.

The following figures illustrate the multiplicity of organs involved in these 102 pulmonary cases (lymph glands, skin and bones not included): 7 organs in 7 cases; 5 organs in 10 cases; 4 organs in 12 cases; 3 organs in 29 cases; 2 organs in 23 cases.

In only 21 of the 102 cases was pulmonary tuberculosis the only demonstrable tuberculous lesion.

In the 28 cases of tuberculous infection of the kidneys in these 500 autopsies other organs were affected as follows: 5 other organs in 4 cases; 4 other organs in 8 cases; 3 other organs in 9 cases; 2 other organs in 5 cases; 1 other organ in 2 cases.

In no case was the kidney the only organ involved.

In all cases of tuberculous nephritis there was associated pulmonary tuberculosis.

Such a review prompts us to ask ourselves: How many physicians, in diagnosing or treating pulmonary tuberculosis, where this constitutes the major disease, realize or consider that nearly half of the patients with this disease have also tuberculosis of the liver, that nearly half have tuberculosis of the spleen, nearly a third have tuberculous nephritis; that 68 per cent have from three to six organs involved; that in only one-fifth of the cases is the disease confined to the chest alone? How many surgeons, in removing a tuberculous kidney, really appreciate the fact that tuberculous nephritis practically always involves other organs; that there is practically always an accompanying pulmonary tuberculosis; that in 75 per cent of the cases of renal tuberculosis from three to five other organs are involved?

A consideration of these facts makes it easier for us to believe that tuberculosis is primarily a disease of lymphoid tissue; that lymphoid tissue constitutes first choice for the organism; that by the blood stream mainly the bacteria are generally distributed, exposing all organs which possess a variation in susceptibility ranging from lung tissue which is second, to the pancreas which is probably last. In acute miliary tuberculosis old lymph gland involvement can usually be found. However, experiments have been performed in which tubercle bacilli introduced into the rectum were found in the peribronchial lymph glands within a few days.

Toxic degeneration of the liver is a factor not to be underestimated in tubercu-

lous infections. This great detoxifying organ of the body suffers degeneration many times as a result of exposure to various bacterial and chemical poisons, but those elaborated by the tubercle bacillus, or as a result of tissue destruction in tuberculous infections, is of major importance. In over three-fourths of the cases of pulmonary tuberculosis in this series of post-mortems there was either tuberculous hepatitis or toxic degeneration of the liver. In the previous series of 300 autopsies, of which 73 showed moderate or extensive toxic degeneration of the liver, the major pathology in 23, or about one-third, was tuberculosis, all cases showing pulmonary involvement. In 13 cases, or 19 per cent, the liver degeneration itself was the major pathology being idiopathic or primary and included four cases of acute yellow atrophy. Pneumonia came next with 12 cases.

SURGERY OF TUBERCULOUS CONDITIONS

Dr. A. H. Whittaker presented a discussion of the surgical aspects of tuberculosis and demonstrated the methods followed in various European clinics, by means of moving pictures, which were taken during 1927.

The first pictures demonstrated the treatment of tuberculosis of the joints by heliotherapy in the clinics of Oslo, Norway. Extensive equipment of carbon-arc lights, to which patients are exposed daily, was shown; also pictures of Dr. Bull, Professor of Surgery in the University of Oslo. It was explained that Dr. Bull had had a very extensive experience with thoracic surgery during the last fifteen years. His chest surgery is done under gas anesthesia, in thoracoplasties, the rib removal being extensive and done in two and occasionally three stages.

Surgical tuberculosis in Denmark was shown by views of the Finsen Institute, which (since Finsen's death), has been a governmental institute. A large number of cases of lupus vulgaris are sent here from all over the kingdom. The patients examined at the institute, usually showed involvement of the face, particularly the nose, with extensive destruction of the tissue. These cases, in addition to careful dietary measures, receive daily exposure to the large water-cooled Finsen lights. Pictures of these lights were shown, seven or eight patients grouped on stretchers around each light. The carbon-arc lights

were also shown in use, as in Denmark very few of the Mercury burners are used to generate ultra-violet.

At the University of Hamburg, Professor Brauer was shown talking at the Deutsche Forshungsanstalt Fur Tuberkulose of the influence of artificial inactivity (Ruhigstellung) and collapse of diseased lungs in pulmonary tuberculosis of the kidneys, in which, he stated that in an extensive experience in surgery of the kidney and in the autopsy room and in the laboratory, he had never seen tuberculosis of the kidney recover spontaneously, and as the other kidney always becomes secondarily infected, he advised immediate removal of the kidney as soon as diagnosis is established.

Views were then shown of the large medical department of the University of Leipsic. Several operations were shown of the clinic of Dr. Payer, Professor of Surgery. There was an arthroplasty of the elbow to correct an old tuberculous process; an amputation of the leg and a spleenectomy.

SKIN TUBERCULOSIS

GEORGE VAN RHEE, M.D.

(Associate Attending Dermatologist)

J. L.—Age 33, female, born in Finland, at eleven years of age developed a red patch on the tip of the nose. Shortly after the onset she was

usually increasing in size. Two years later she was treated at the University of Michigan hospital for six months. She stated there was some improvement. Following this she had an artificial nose made in Chicago. In 1918 she came to Harper hospital with erythematous patches on both cheeks extended on to the bridge of nose. The cartilagenous portion of the nose was gone. The skin was thickened and scarred. She was treated for about three years with a Quartz light with very good results. She then went to Grand Rapids where Dr. Ferris Smith constructed a new nose. There was no recurrence for four years. Two years ago the disease appeared on left cheek and nose. The condition gradually spread over entire cheek and nose. October 1927 she came to Receiving hospital with a very marked involvement of left cheek, nose and small patch on right cheek. She has been treated with biweekly applications of Kromayer lamp and injections of Gold sodium thiosulphate.

The types of tuberculosis of the skin due to the direct infection with the tubercle bacillus are lupus vulgaris, tuberculosis verrucosa cutis, acute tuberculous ulcer and scrofuloderma. In this discussion we will consider one of them, lupus vulgaris.

This disease is more common in Europe than in America. In a survey by the American Dermatological Association it comprised about 25 per cent of all dematoses.

The exciting cause of the disease is the tubercle bacillus which enters the skin from without. It is still unsettled whether the human or bovine type is responsible. The young are most frequently affected, it being rare to find a case beginning in a person after thirty years of age. Although Crocker reports two cases at sixty-three and one at forty-six. Lupus vulgaris may occur in persons of good health, but it is usually seen in those who are below standard. Bad hygiene, overcrowding, filth, presence of tuberculosis in other members of the family, are predisposing causes. Some cases are due to a direct external inoculation, as following trauma, after circumcision, after tattooing and rarely following vaccinations.

MUCOUS MEMBRANES INVOLVED

Lupus vulgaris can involve the mucous membranes as well as the cutaneous surfaces. The face, especially the nose, cheeks and ears, are most frequently involved. In our case the disease began on the nose. All of the mucous surfaces of the nose, mouth and the genitals may be affected. In a statistical study of 374 cases, Bender found the face involved in over 75 per cent and Forchammer found the mucous membranes involved in 72 per cent.

The disease begins with the formation



taken to the hospital where the tip of the nose was amputated. She emigrated to this country when twelve years of age. At fourteen years of age the disease appeared on the left cheek grad-

of small miliary tubercules in the upper portion of the corium. To the naked eye, they appear as small brownish, slightly infiltrated nodules. Under a glass slide the individual tubercles can be seen as the characteristic "apple jelly nodules". The lesions spread from the periphery and form patches. These patches may remain unchanged for months until finally the older lesions undergo necrosis and form shallow ulcers with overhanging edges, red base, frequently covered with a brown crust. They heal, forming soft, smooth or keloidal scars. In some cases, there is a large amount of destruction and distortion such as ectropion, narrowing and loss of nasal orifices and loss of fingers.

The pathology of lupus vulgaris is similar to tuberculosis elsewhere in the body.

MISTAKEN FOR LUPUS

Syphilis and carcinomata are frequently mistaken for lupus. Syphilis is not common at an early age. It spreads more rapidly than lupus and forms sharply defined punched out ulcers. The Wassermann reaction, the therapeutic test and, if necessary, a biopsy should establish a diagnosis.

Cancer very seldom appears before the age of forty. In cancer, the edges are hard, elevated, and here again the removal of tissue will establish a diagnosis. Carcinoma can occur on an old lupus scar.

Lupus vulgaris is a very chronic disease and rebellious to treatment. The general management is the same as for any other form of tuberculosis. The patient should receive plenty of fresh air, nourishing food and avoid undue fatigue.

Tuberculin has been used in small doses and is of doubtful value. It is contraindicated in cases associated with acute pulmonary tuberculosis.

Local treatment is important. Of the various physical agents the Finsen light and Quartz light head the list. Small lesions can be very successfully removed by electrodesiccation or carbon dioxide snow. We used the Kromayer light and injections of Gold sodium thiosulphate. It is too early to derive any conclusions in regard to the efficiency of Gold sodium thiosulphate.

DR. GEORGE W. JONES HONORED

A complimentary dinner was tendered Dr. George W. Jones of Imlay City, February 18th by his son Dr. Morrell M. Jones of Detroit. This was one of the most pleasant medical social events within recent years. The dinner was served in the club rooms of the Wayne County

Medical Society. Dr. G. VanAmber Brown acted as toastmaster and in a brief, well worded address, referred to the occasion of the meeting to do honor to one whose whole life had redounded with honor to the medical profession of Michigan. Dr. Jones is probably the oldest physician in active practice in the State of Michigan. Toasts were responded to by Doctors H. E. Randall, president



Dr. George W. Jones.

(Honorary Member of the Michigan State Medical Society.)

Imlay City, Mich.

of the Michigan State Medical Society, J. L. Chester, J. G. Campbell of Brown City, Mich., L. J. Hirschman, J. H. Andries, M. C. Jones, Youngstown, Ohio, Morrell Jones and by Dr. William Kay, Lapeer, Mich. Dr. Jones was presented with a beautiful gold watch.

The invited guests in addition to those who responded to toasts were: Doctors Bruce Campbell, P. E. Martin, Imlay City; N. M. Allen, Max Ballin, Angus McLean, W. D. Barrett, W. R. Clinton, R. Peterson, Ann Arbor; H. Haynes, University Hospital, Ann Arbor; T. H. Best, James Marshall, O. Hastings, Reilly; Fred Thompson, William Hackett, George Baker, F. J. Roberts, R. L. Schaeffer, H. L. Clark, S. E. Sanderson, J. H. Dempster, Emil Amberg, E. J. Watson, N. E. Aronstam, Bruce Anderson, Curtis, T. F. Keating, George Kamperman, Fred Cole, L. J. Gariepy, C. D. Brooks and William Woodworth.

Dr. Jones made the following address which is of such general interest to the profession of the state that we herewith present it in full.

OFFERS NO LIFE ELIXIR

Mr. Chairman and Fellow Physicians:

I feel myself unworthy of the honor accorded

me on this occasion. I have, during my whole professional life, tried to avoid publicity of all kinds, and I assure you that this meeting was not sought by me. It was staged without my knowledge or consent.

However, I am here, and it is a great pleasure to be surrounded by so many prominent members of the medical profession. I recall that a strange fatality often follows occasions of this character. I am reminded that Doctors Carstens, Walker and McGraw, of your city, passed away soon after banquets were held in their honor. I trust this will not be my fate.

With your permission, I will relate a few incidents of my life. I was the son of Rev. George and Laura Jones, an M. E. Minister of Ontario. I was born at Orona, County of Durham, Ontario, February 11, 1839. It is true that I have been in the harness for a good many years; but it is my privilege to be old in years, but young in spirit. There are thousands of men who grow old before their time. With idleness, they become restless, discontented and unhappy. Such a life results in physical and mental decay. I have no elixir of life to offer. Keeping in touch with professional current events, and abreast of the times, conjoined with correct habits of life, are important factors in delaying old age, and alleviating the effects of senility. In my younger days, the more I worked the more I wanted to work and the more I worked the more I enjoyed my work. Work is a great safety valve—it keeps us out of mischief and promotes our happiness.

I received a common and grammar school education and on November 6, 1854, began the study of medicine with Dr. E. G. Dorland of Belleville, Ont. I remained with the doctor for one year, and on November 1, 1855, I made my way to Toronto, on the top of an old-fashioned stage-coach, as there were no railroads at that time (the Grand Trunk was building, but no trains were running) at Toronto. I matriculated with the Medical Department of Victoria College, better known at that time as Dr. Rolph's School of Medicine, where I remained until the close of the session, in the spring of 1856.

On November 1, 1856, I returned to Victoria College intending to continue my studies there, but owing to a disorganization of the faculty, I became dissatisfied and left for Buffalo, N. Y., where I entered the University of Buffalo Medical College and remained until the close of the session in the spring of 1857.

I returned to Buffalo in the fall of 1857 and on February 24, 1858, I graduated, receiving the Degree of M. D.

On the 7th of July, 1858, I went before the Ontario Provincial Medical Board and passed my examination for a Provincial license, which gave me permission to practice in any part of Ontario. I began the practice of my profession early in 1859 at Prince Albert and Port Perry, Ontario, where I remained until December, 1870, when I was succeeded by my brother, Dr. Richard Jones, now deceased; and I removed to Imlay City, Mich., where I have since resided.

GRADUATE WORK IN 1860

In 1860 I took a post graduate course in New York City and again in 1862 spent four months more there. I was a charter member of the Lapeer County Medical Society, and served as president for two years, succeeding the late Dr. Hugh McColl. On August 18, 1916, I was made

an honorary member of the Michigan State Medical Society.

During my long residence in Imlay City I have witnessed many and marvelous changes in the village and its surroundings. In 1870 it was a small, insignificant hamlet of less than 100 inhabitants. There were no churches and no school house. Many of the streets contained the stumps of forest trees. The roads in every direction were in bad condition, and almost impassable. I made many of my professional calls in the country on horse-back. To illustrate some of the hardships I endured in my early practice I will mention one of many similar ones. On a dark, rainy night in November, I received an urgent call to attend a man in the Lynn swamp some eight miles distant, who was reported to be bleeding to death from a severe wound in his leg. I mounted my horse, which by the way was a thoroughbred saddle-horse, which I had brought from Canada, and hastened to his bedside. The marsh was in such a condition that I was obliged to hoof it for more than a mile, tying my horse to a tree on dry land until I returned. When I reached the man's abode I found he had bled profusely with his leg corded tightly by twine. He was all alone in his shack. I found he had severed a large artery of the leg and so without any assistance and in the dim light of an old dirty lantern I ligated the artery, which arrested the hemorrhage. I then made my way to my faithful horse and returned home at 12:30 o'clock, tired and sleepy. For this trip my bill is unpaid to this day. I could recite scores of similar cases, but I forbear. Our highways and streets rapidly improved and today our main streets and important roads are all paved.

FIRST DOCTOR IN IMLAY CITY

I was the first physician to settle in Imlay City, coming there December 23, 1870. During my long residence I have been actively identified with its interests and filled various positions of trust and responsibility, such as a member of the school board for many years, postmaster for 12 years under four different administrations; president of Imlay City several terms; promoter and founder of Imlay City Fair Association and its president for seven years; local surgeon for Grand Trunk Railway for near 30 years; member of Lapeer County Pension Board and chairman for 52 years of Congressional Board of Trustees. I have voted at each village, township, state and national election since I became a naturalized citizen.

I was made a Master Mason by Mt. Zion Lodge, Brooklin, Ont., August 20, 1866. My record is that of the oldest living member of Imlay City Lodge No. 341.

In my early practice obstetrical cases were \$5 each and one free visit afterwards; the fee gradually increased to \$8 and \$10. In a review of my obstetrical cases I find 1,700 to my credit. I carried my dental instruments with me on all country calls and extracted teeth at 25 cents per tooth. I kept a good supply of leeches on hand and often used them for local bleeding. I also resorted to wet and dry cupping quite frequently. I used for many years a sacrificator, which, by touching a spring, made 10 incisions, to be followed by suction with cups. Bleeding was practiced quite generally for inflammatory diseases, especially for pneumonia, and pleurisy. Emetics were very commonly used at the beginning of many diseases,

followed by blue pill, senna and salts. Tartar emetic in nauseating doses was extensively used in croup and as an expectorant, setons and issues for deep seated diseases were often used. Fly-blisters were our sheet-anchor in pneumonia and pleurisy. Clinical thermometers were unknown when I began to practice and the stethoscope then in use was an ordinary cylinder made of red cedar wood. This was soon followed by improved makes. A host of new instruments and devices now used were unknown and diseases and new methods of treatment have since been discovered. Appendicitis, as a distinct disease, was unrecognized, such cases were diagnosed as "inflammation of the bowels," and nearly all died. The function of the ductless glands and their derivatives were not dreamed of, while vaccines and serums were not yet discovered. While I think many of the devices and methods of treatment have been over-estimated, no one can question the fact that great advances have been made along surgical lines as well as in the treatment of diseases.

Since the sad death of my beloved companion, February 13, 1914, I have lived in my old homestead with my daughter, Mrs. G. F. Butler, who has done everything in her power for my comfort and happiness.

In a review of my past life I have great reason to be thankful to my Heavenly Father for my longevity and freedom from all diseases. I have always been a total abstainer from all intoxicating liquors, and actively interested in the cause of temperance. For 15 years I smoked moderately, but finding tobacco was having an injurious effect upon my heart, I decided to discontinue its use, over 20 years ago, and to this fact I firmly believe my life has been prolonged beyond that attained by the majority of mankind.

VALUED LESSONS

My experience has taught me a few valuable lessons. In the first place, I would advise all young physicians, especially, not to engage actively in party political affairs; there is nothing to be gained thereby, except worry and vexation of spirit. It is very true I have been very well rewarded for my political activities, but what I have gained thereby has been lost by the neglect of my medical practice.

In the second place, I would advise against farming and fast horses. From my youth I have been a great lover of horses and for many years I engaged actively in breeding standard-bred driving horses, but with the advent of the automobile the horse business became unprofitable and I sustained heavy losses thereby.

And I would advise against investing in all "get-rich-quick" schemes—most physicians are "easy marks"—they bite at everything presented to them. I have had my experience in gold and iron mining and suffered heavy losses.

My advice to all young physicians is to give your undivided attention to your profession, free from all entangling, outside ventures. When you become rich or wish to retire, take up anything that your mature judgment approves of, as a fad or a sideline. I have always thought that a collegiate and classical education should be considered as essential pre-requisite before entering upon the study of medicine. Such studies develop every faculty of the mind and furnish a fitting foundation for his future medical course. I have felt this, as a handicap in my personal experience, and regretted that, owing to my

father's limited means, with a family of 10 children, I was deprived of this great advantage.

Notwithstanding all my losses and disappointments, I can truthfully say, "although age and infirmity overtake me, and I come not within sight of the castle of my dreams, teach me, O Lord, to be thankful for life and for time's olden memories that are good and sweet, and may the evening twilight find me gentle still"; and when the last summons comes, which will come to us all, may I be able to look back to a life of honor, and in the words of Henry Van Dyke, say:

*"I shall grow old; but never lose life's zest,
Because the road's last turn will be the best."*

NEW VITAMIN NEEDED BY YOUNG TROUT

A new vitamin, designated as "Factor 'H'" by its discoverers, has been added to the list of these mysterious accessory food substances required for normal health and growth in animals. It is found in raw liver, and to a slight extent in dried milk, and so far as is yet known is needed only by young trout. With it they grow normally, without it they die.

The discovery was made by C. M. McCay, F. C. Bing and W. E. Dilley of Cornell University, and will be formally announced in the forthcoming issue of Science. It came as the result of an effort to learn the scientific reason underlying the common practice in fish hatcheries of feeding young trout raw liver. Groups of fingerlings were kept in isolated feeding pools, and supplied with carefully compounded rations. Some of these included various known vitamins and some of them no vitamins at all. One group received a vitamin-free diet with a certain amount of dried milk added. None of the fish got any liver at the start.

One by one all the groups of young fish died, although the ones receiving dried milk along with their food outlived the rest. Finally one group of survivors was allowed to have its normal diet of raw liver. Immediately they "picked up" and began to grow rapidly. The investigators therefore concluded that young trout need, for life and normal growth, something that is found in raw liver and to a less extent in dried milk, but yet is not any known vitamin.—Science Service.

HARVARD SCIENTIST DISSECTS MUMMIES OF OLDEST AMERICANS

Mummies of America's oldest inhabitants have been dissected by Gale E. Wilson, anatomist, of the Harvard Medical School. The mummies belong to the Basket Maker Indians, who lived in the southwest before the time of Christ, 3000 B. C. or possibly much earlier. Mr. Wilson states, in reporting his investigation to the American Naturalist. The bodies, which were found in Arizona, are at least as old as most of the early Egyptian mummies, the anatomist states. Repeated tests have failed to reveal traces of blood in Egyptian mummies, but in the American specimens were found red blood cells, shrunken and dried but perfectly preserved. Unlike the Egyptian mummies, which were prepared by elaborate processes, these bodies were not embalmed at all. They were simply buried, and their preservation is due to the unusual drying qualities of hot sand and warm dry climate.—Science Service.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner*

SAFER ROADSIDE WATER SUPPLIES

A progressive increase in the percentage of safe roadside drinking water supplies is shown by the report of the 1927 survey. In 1925, when supervision of highway water supplies was first undertaken by the Michigan Department of Health, 63.7 per cent of the sources investigated were found safe. This rose in 1926 to 76.3 per cent, and in 1927 it reached 83.6 per cent. This marked improvement can only be attributed to the program of testing and education carried on throughout the state during that time.

Work in 1927 was conducted in the same general manner as in previous years. The first samples were collected on June 1 and the last samples in the Lower Peninsula August 1st and in the Upper Peninsula August 22nd. Posting was begun on June 23 and completed on August 9 except for a few municipal supplies.

Three men handled the work, traveling by automobile. Two collected the samples and one posted the safe supplies. This covered the routes very successfully and made sure that few, if any, possible drinking sources were overlooked. In addition to collecting the samples of water, the men inspected the surroundings of the well to make sure that there were no obvious sources of contamination.

Safe supplies were marked with a metal "Approved" sign as in previous years, the colors corresponding to the colors of the automobile license plates. The black letters on an orange background of the 1927 plates made such a satisfactory combination that this, or something similar to it, will be adopted permanently. While the individual supply signs are not large enough to attract attention from a moving automobile at a distance, they are quite conspicuous enough to draw attention to the well when a person is near by.

Separate signs for municipal supplies were used for the first time in 1927. They are 9½ inches by 13 inches and read "Public Water Supply APPROVED Michigan Department of Health." These were attached to the posts of the municipal limits signs erected by the Highway Department along state trunk lines. This is a very conspicuous place to put them and the result

has been very satisfactory. Many city officials expressed their appreciation of the efforts of the state in advertising to the public that these supplies were suitable for drinking purposes.

Only the safe supplies were marked, following the experience of previous years. Attempting to place warning signs on unsafe supplies was discontinued after the first year, due to the impossibility of keeping the signs up. Educational efforts have been directed toward persuading the traveling public to drink only at "Approved" supplies.

Detailed report of the 1927 survey shows that 84 days were spent on the work, that 1,212 samples were collected from 1,202 sources, and that a total of 7,190 miles of trunk lines were traveled.

A comparison of the results for the three years that the work has been carried on appears in the following table:

RESULTS FOR THREE YEARS

Year	Miles Covered	Sources	No. Safe	% Safe	No. Unsafe	% Unsafe
1925	1,787	427	272	63.7	155	36.3
1926	5,479	805	619	76.3	186	23.7
1927	7,190	1,196	1,000	83.6	196	16.4

On numerous occasions it was found that a well previously judged unsafe had been repaired so as to produce a satisfactory water or else that the use of the well had been abandoned.

The depth of the well continued to have an important bearing on safety. This is shown for 1927 in the following tabulation:

25 feet or less—	
Safe, 123.....	75.5 %
Unsafe, 40.....	24.5 %
Total, 163.....	100.0 %
25 feet to 50 feet—	
Safe, 131.....	86.2 %
Unsafe, 21.....	13.8 %
Total, 152.....	100.0 %
50 feet to 75 feet—	
Safe, 40.....	80.0 %
Unsafe, 10.....	20.0 %
Total, 50.....	100.0 %
75 feet to 100 feet—	
Safe, 49.....	92.5 %
Unsafe, 4.....	7.5 %
Total, 53.....	100.0 %
Over 100 feet—	
Safe, 75.....	89.3 %
Unsafe, 9.....	10.7 %
Total, 84.....	100.0 %

The 1927 results emphasize still further the superiority of tubular wells over dug

wells and springs. This appears in the following table:

Tubular—			
Safe,	806	86.6 %	
Unsafe,	125	13.4 %	
Total,	931	100.0 %	
Dug—			
Safe,	36	48.7 %	
Unsafe,	38	51.3 %	
Total,	74	100.0 %	
Springs—			
Safe,	17	68.0 %	
Unsafe,	8	32.0 %	
Total,	25	100.0 %	

Samples were analyzed from 292 school supplies, 254 of which, 87 per cent, were found safe. This is a gain over the 80 per cent found safe last year.

Municipal supplies totaling 161 were tested. Of these, 138 or 85.7 per cent were found safe. In addition to those judged safe upon analysis, 52 others were known to be safe from information in the office. A complete total of 190 municipal supplies were therefore posted as approved by the Michigan Department of Health.

Twenty-eight tourist camps were inspected on the survey. The ratings of the camps based on a composite consideration of all camp facilities show 53.6 per cent good, 35.7 per cent fair, and 10.7 per cent bad.—E. D. R.

MICHIGAN SAFETY CONGRESS

All physicians interested in industrial medicine or surgery are cordially invited to attend the sessions of the Michigan Safety Congress to be held at the Hotel Olds in Lansing on April 11, 12 and 13.

On the afternoon of April 12 and the morning of the 13th there will be meetings of the Health Section. Topics to be discussed include "Dental Prophylaxis in Industry," "The Value of Physical Examinations (a) From the Standpoint of the Management, and (b) From the Standpoint of the Physician," "Industrial Surgery with Special Reference to Rehabilitation of the Injured," "Preventive Medicine in Industry," "The Nurse in Industry," and "The Status of Medical Work in Industry as Revealed by a Census of Forty Michigan Plants."

THE HEALTH OFFICER'S MANUAL

(Continued)

VI. CARRIERS

(A) Definition:—

When an infectious agent is found on a person having no clinical manifestations of the disease, the person is said to be a carrier.

1. Incubatory Carrier—When an infectious agent is found on a person having

no clinical manifestations of the disease, who develops the disease within the incubation period after this finding, such person is an incubatory carrier.

2. Convalescent Carrier—When an infectious agent is found on a person having no clinical manifestations of the disease—soon after having had the disease, the person is a convalescent carrier.

3. Direct Contact Carrier—When an infectious agent is found on a person having no clinical manifestations of the disease—who has been in direct contact with a case of the disease, the person is a direct contact carrier.

4. Remote Contact Carrier—When an infectious agent is found on a person having no clinical manifestations of the disease—and who has had no contact with any active clinical case of the disease, the person is a remote contact carrier.

VII. IMMUNITY

(A) Definitions:—

For the purposes of these Rules and Regulations, persons may be regarded as immune to a disease under the following conditions:

1. To Diphtheria—(a) Having a negative Schick test. (b) Having been inoculated with adequate doses of toxin-antitoxin as shown by a negative Schick test. (c) Having been given at least 2,000 units of diphtheria antitoxin, the person will be immune for six weeks.

2. To Smallpox—(a) By having had the disease at some previous time and having fully recovered and this fact has been made a matter of record with the local health officer at the time of the illness. (b) By successful vaccination with cowpox virus, not more than five years having elapsed since the vaccination.

3. To Scarlet Fever—(a) By having had the disease at some previous time and having fully recovered and this fact has been made a matter of record with the local health officer at the time of the illness. (b) Having been inoculated with adequate doses of scarlet fever streptococcic toxin as shown by a negative Dick test. (c) Having a negative Dick test.

4. To Typhoid Fever or Paratyphoid—(a) By having had the disease at some previous time and having fully recovered and this fact has been made a matter of record with the local health officer at the time of the illness. (b) By the inoculation of $2\frac{1}{2}$ billion of dead typhoid bacilli and $2\frac{1}{2}$ billion of paratyphoid bacilli (A and B) given in three divided doses one week apart, the dosage of typhoid bacilli being of 500 mil-

lion, one billion and one billion respectively; not more than two years having elapsed since the inoculation.

5. To Whooping Cough, Mumps, Chickenpox, Measles and German Measles—(a) By having had the disease at some previous time and having fully recovered and this fact has been made a matter of record with the local health officer at the time of the illness.

(B) Other Definitions—

1. For the purposes of these Rules and Regulations the word "susceptible" shall include all persons not known to be immune.

2. For the purposes of these Rules and Regulations the word "vaccination" shall mean the inoculation of cowpox virus, and the formation of a typical lesion which heals with a characteristic scar.

3. For the purposes of these Rules and Regulations the word "contact" shall mean any person who has been sufficiently near to any infected person or animal to have been exposed to the possibility of the transfer of the infectious material either by direct contact or indirectly by articles freshly soiled by discharges from the patient.

VIII. CONTACTS

1. Contact with a communicable disease will usually be found to be in one of three degrees of intimacy.

Contact by reason of living in the home of a case is most intimate and therefore requires the closest degree of supervision, looking toward the contact developing the disease.

For example, a person who is a diphtheria contact by reason of having lived in the home of a case should be subject to the most careful supervision. That is, the adults and immune children have their noses and throats cultured to determine whether they are carrying the organisms. the susceptible school children are excluded from school for a sufficient length of time to allow the development of the disease, if they are to develop it from that contact. This exclusion period is one week.

The second degree of intimacy of contact is that contact which results from being in a schoolroom or small school at the same time as a case in any stage of the development of the disease. For example, a child who is a contact by reason of having been in a schoolroom or small school simultaneously with a case of diphtheria should be given the advantage of (1) a throat culture examination, (2) a physical examination for any of the signs and symptoms that may be signs and symptoms of diph-

theria, before the beginning of school work, every day for one week after the last possible exposure to a case of diphtheria.

The third degree of contact is that such as all persons are exposed to in carrying on the usual functions of their daily life. One cannot live in a modern community, ride on street cars, go to theaters, attend church, etc., without being exposed to this degree of contact with infectious disease. To illustrate again with diphtheria:—Persons are advised to call their physician's attention at once to any (1) sore throat, (2) rise of temperature, (3) or any indisposition of any kind for a period of one week after any possible exposure.

IX. CONTAGIOUS DISEASES ON DAIRY FARMS

1. Certain communicable diseases are readily transmitted by means of milk or dairy products. For this reason these Rules and Regulations require that "owners and managers of any dairy farm or any place where dairy products are handled or offered for sale shall REPORT all cases of communicable disease among their employes or their employes' families, to the local health officer.

2. Whenever a case of diphtheria, scarlet fever, smallpox, poliomyelitis, meningitis, typhoid fever or septic sore throat is found to exist on any farm or other place where dairy products are handled or offered for sale, the sale of all milk from these premises shall be stopped at once.

3. Where the sale of milk or dairy products has been stopped under the provisions of the previous paragraph, the local health officer is hereby authorized to make an investigation as to the possibility of resuming the sale of such dairy products.

4. When the health officer finds such circumstances that:—

a. All the animals can be cared for and
b. The milk can be handled by persons who are not living in a quarantined area and

c. All the utensils can be washed and cleaned by persons not living in the quarantined area and

d. The persons in the quarantined area shall not come in direct or indirect contact with the animals or the milk or the utensils or any person who does come in contact with them, these facts shall be stated in writing to the State Commissioner of Health who may, in his discretion, permit milk to be sold from these premises under these circumstances.

ADRIAN'S "MYSTERIOUS EPIDEMIC"

The "mysterious malady" in Adrian that

aroused newspaper comment recently was explained by the local health officer in answer to inquiry from Dr. Kiefer. We quote from the health officer's letter:

"Replying to your letter of February 22, I will say that we had five cases of streptococcic infection of the throat which took on a fulminating type and caused death. These cases were confined to four families.

"In the particular cases mentioned in the clipping which you enclosed, the mother died of erysipelas which complicated or followed a streptococcic infection of the throat. The throat symptoms were not severe but the adenitis was very severe, and as this subsided the erysipelas developed. The daughter previous to the mother's illness developed a streptococcic infection of the throat and when she was apparently recovering, a hemorrhage from the throat occurred and caused her death. This is the report as I obtained it from the attending physician.

"We had three other cases where death occurred and these cases started with a sore throat and adenitis, peritonitis developed early and death followed in four or five days.

"We have had a large number of cases of sore throat with adenitis and often parotiditis usually unilateral and the most of these cases were not attended by physicians.

"I do not think it is anything different from what is prevailing throughout the state, but we were unfortunate in having these fatal cases. It is very evidently very infectious. At present we have no severe cases and have not had any for ten days."

EMERGENCY AID

A trip that in essentials if not in setting re-enacted the famous expedition to Nome was made by Dr. Don M. Griswold, Deputy Commissioner of Health, recently.

At three o'clock on the afternoon of February 28 a telephone call came in from Farwell, a little town in the southern part of Clare County. Five children were ill with diphtheria, one had died, the schools had been ordered closed, and the community asked help from the State Department of Health.

At three-thirty Dr. Griswold was on his way, by automobile, with antitoxin. Arriving at Farwell he found that the six children belonged to a family of ten children, living with their parents in a little house. Two nurses had already been sent in by interested friends.

Giving of antitoxin had been delayed be-

cause the laboratory report on the child that died had been negative.

At Dr. Griswold's suggestion additional antitoxin was given to all the children in the family. Subsequently, the school board held a meeting and voted to have the local physician give toxin-antitoxin in the schools. The school was opened on the following Monday morning, March 5, and no subsequent cases of diphtheria have been reported.

PREVALENCE OF DISEASE

	February Report			
	Cases Reported			
	January	February	February	Av. 5
	1928	1928	1927	yrs.
Pneumonia	484	798	679	824
Tuberculosis	404	538	342	393
Typhoid Fever	24	31	33	36
Diphtheria	362	300	485	473
Whooping Cough	594	665	534	648
Scarlet Fever	1,091	1,283	1,423	1,453
Measles	1,539	2,580	902	2,477
Smallpox	168	147	186	196
Meningitis	10	15	13	16
Poliomyelitis	7	5	2	3
Syphilis	1,496	1,222	1,148	1,021
Gonorrhea	855	596	717	818
Chancroid	12	11	12	12

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

March, 1928

	+	—	+-	Total
Throat Swabs for Diphtheria				1293
Diagnosis	27	225		
Release	32	96		
Carrier	24	873		
Virulence	7	9		
Throat Swabs for Hemolytic Streptococci				1011
Diagnosis	62	52		
Carrier	77	820		
Throat Swabs for Vincent's	19	233		252
Syphilis				7986
Wassermann				
Kahn	1165	6760	61	
Darkfield				
Examination for Gonococci	141	1165		1306
B. Tuberculosis				456
Sputum	59	351		
Animal Inoculations	2	44		
Typhoid				170
Feces	17	71		
Urine		7		
Blood Cultures	3	34		
Widals	12	26		
B. Abortus				46
Dysentery				51
Intestinal Parasites				30
Transudates and Exudates				153
Blood Examinations (not classified)				214
Urine Examinations (not classified)				357
Water and Sewage Examinations				484
Milk Examinations				95
Toxicological Examinations				11
Autogenous Vaccines				4
Supplementary Examinations				137
Unclassified Examinations				746
Total for the Month				14802
Cumulative Total (fiscal year)				104027
Increase over this month last year				2388
Outfits Mailed Out				16290
Media Manufactured, c.c.				246562
Antitoxin Distributed, units				20225000
Toxin Antitoxin Distributed, c. c.				21570
Typhoid Vaccine Distributed, c. c.				2908
Silver Nitrate Ampules Distributed				5036
Examinations Made by the Houghton Laboratory				2705
Examinations Made by the Grand Rapids Laboratory				6686

THE JOURNAL

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APRIL, 1928

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

OUR WAGON AND THE STAR

It is a novel experience, not unmixed with a feeling of apprehension, to assume the editorial duties of a journal such as this which is in its twenty-seventh year and therefore, as things go, well into manhood. The earlier years have been fostered by such men as Biddle, Schenck, Haughey and lastly Warnshuis and under their aegis its evolution has been continuous and has reflected the development of the science and art of medicine and surgery during the greatest quarter of a century in the history of medicine. A magazine published under the auspices of a State Medical Society is in no sense a narrowly specialist publication; that is, its purpose must not be confined to the interests of any single department of either medicine or surgery. The editorial view must be broad rather than intensive. Contributions of an obviously technical nature will find their way into specialist journals. The article for this publication, while it may be written by the specialist, will have a broader appeal.

The present editor enters upon his

duties in the hope that he will be worthy of his editorial lineage. Some changes have doubtless been noted in the March number. Change does not necessarily mean improvement. Variety, however, is the spice of life and it will be our policy to present a monthly program that we hope will meet the approval of all.

The editing of a medical magazine is somewhat like standing behind the radio transmitter or talking into a dictaphone. There is a certain loneliness about it. The audience in the case of the radio and the editor is in front, but invisible; the response is not immediate. If the time comes when the reader no longer removes the wrapper from his Journal, it means editorial failure. We, therefore, welcome criticism and suggestions for improvement.

One or two new features might be mentioned, for instance, the column of general medical news consisting of short, condensed paragraphs, embracing current happenings at home and abroad; secondly, the Doctor's Library with an introductory paper written by some book lover in the profession. It is our purpose also to print from time to time reports of clinics or staff meetings showing the actual discussions which take place at various hospitals in the State. In this way the Journal will fill the role of clearing house for the ideas of men in active performance of the work. You may be located far from the madding crowd, yet this fact does not preclude you from sending in an account of some interesting case or experience you may have had. The very situation which places you on your own resources has given you a marked advantage over your confrere in the city who has only to step to the telephone for assistance. But, however remote or isolated your location, we shall be pleased to hear from you.

DR. JONES CONGRATULATIONS

It is a pleasant privilege we exercise in extending our felicitations to Dr. George W. Jones of Imlay City, on the attainment of his eighty-ninth birthday with the mental alertness and good health of a man many years his junior. The doctor says he has no panacea, no elixir of life to offer to account for his longevity. Elsewhere in this number of the Journal is an address by the doctor delivered on the occasion of the complimentary dinner tendered him by one of his sons. If there is any elixir that will postpone the infirmities of

age, the doctor has at least hinted at it, namely work, not the activity of the drudge but work directed by intelligence. An important antidote to the limitations of age is an equal mind, *aequanimitas* as Osler was wont to inculcate in his happy philosophy. Truly the Kingdom of Heaven is within you. "For" as Cicero has so aptly put it, "to those who have not the means within themselves of a virtuous and happy life every age is burdensome; and, on the other hand to those who seek all good from themselves, nothing can seem evil that the laws of nature inevitably impose."

The doctor has been a great reader and probably at no time greater than the past two or three years according to a statement by himself. One cannot become old in the real sense so long as his interests are varied and keen. The fact of having raised two sons whom he has lived to see successfully established in medical and surgical practice, has also been a powerful incentive to study, for the sires live in the sons. These sons have given the father an opportunity to live his academic life over again much as grandparents renew their younger days in their grandchildren. We repeat so long as a man maintains intelligent contact with his professional work or with his present he cannot grow mentally old.

Dr. Jones does not look his chronological age, otherwise he might say with Adam in *As You Like It*:

"Though I look old yet I am strong
and lusty,
For in my youth I never did apply
Hot and rebellious liquors in my blood,
Nor did not with unbashful forehead
woo
The means of weakness and debility;
Therefore my age is as a lusty winter,
Frosty but kindly."

INCOME AND USEFULNESS, HOW TO INCREASE BOTH

Many of the readers of the Journal might question the propriety, also the ability of the Editor to give sound advice on this subject. "It were easier to tell twenty men what were best to be done than to be one of the twenty to follow mine own instruction," said the Bard of Avon. However, comment is based upon the substance of a prize essay on the subject written by Dr. Hiden and published by Southern Medicine and Surgery. We are living at a time

when the inroads on the legitimate field of medical practice are many and sometimes questionable. The quack and the charlatan, like the proverbial poor, we shall have always with us. There is a growing custom among patients to select their specialists directly without consulting the physician in general practice. This is particularly true in the larger centers of population. Then again there are the activities of organizations of various kinds which tend to usurp the functions of the physician and pauperize the patient under the guise of socialized medicine.

The movement towards the enlightenment of the laity in regard to the advances of scientific medicine should be welcomed in this State since it turns the minds of the people to the service the medical profession are able to render. The value of periodic medical examinations is being stressed. Dr. Hiden, the author of the prize essay, emphasized the importance of thorough gynecological examinations. These were usually only occasional in general practice, and the family physician was often expected to give so-called "uterine tonics" or "ovarian sedatives" without even making a pelvic examination. "Almost any family physician," says the writer, "has ample opportunity for gynecological examinations, if he chooses to do this work. Moreover, such examinations not only furnish ample clinical material for more accuracy in diagnosis and greater efficiency in treatment, but they often reveal morbid conditions that would otherwise escape notice; namely, such conditions as uterine displacement, catarrhal conditions, endometritis, uterine polyps, uterine fibroids and myomata, cervical tears, erosions, pus tubes, hematmata, hematoceles, vesico-vaginal fistulae, pelvic adhesions and simple congestions. Here is unmistakably a great field for the reasonably well-informed practitioner. In making this latter statement I am not advocating radical abdominal and pelvic surgery for the family physician; but why should he not train himself to treat successfully such conditions as simple pelvic congestions, uterine cervical catarrhs, cervical lacerations and erosions, uterine retroversions of the simpler types, endometritis, uterine polyps, cervical atresia, symptoms of menorrhagia, simple forms of amenorrhoea, cervical ulcers or the distressing symptoms of vaginitis?"

Other fields at once suggest themselves. The examination of the eyes for errors of refraction could be made a source of profit

to the general practitioner as well as greatly enhance his usefulness to the community. With his knowledge of the eye, he could master fairly well subjective refraction within a few weeks.

The writer goes on to stress the importance of a properly equipped office which is next in importance to first class mental equipment; the developing of an office practice is emphasized as well as the attendance upon medical meetings. He advocates more discussion of business and sociologic aspects of medicine at these meetings which have been devoted hitherto almost exclusively to the scientific phases of the work.

Conditions are bound to change and the wise physician is he who takes occasion by the hand and adjusts himself to his changing environment.

"LET YOUR DOCTOR DECIDE"

The intensive educational program of the National Tuberculosis Association took place in March of this year, and was a nation-wide move to induce patients to visit their family physician for an earlier diagnosis of tuberculosis. This work should receive the active co-operation of all medical men, inasmuch as it is a necessary part of procuring best results in a disease, the symptoms of which are too often neglected by the people. The slogan, "Let Your Doctor Decide," has been abundantly spread throughout this state by the Michigan Tuberculosis Association and the various County Tuberculosis Societies, the Tuberculosis Society of Detroit and Wayne County being particularly active.

Scientific medicine in tuberculosis on the whole, has advanced beyond the present capacity of this state. It is now a well known fact that the greatest source of infection is an open case of tuberculosis in a home containing children, especially where overcrowding exists. Long continued exposure to a very active case can have only evil results. In spite of this, the procuring of institutional beds for many such indigent patients at present remains an impossibility in many parts of Michigan. Advancement in treatment has been slow perhaps but steady. In recent years there has been added the particularly useful artificial pneumothorax which according to Watson, "will restore the health from 40 to 50 per cent of cases having chronic and acute forms of tuberculosis; of these cases when treated by the usual sanatorium methods; approximately 7 per cent will recover." (This applies to cases

where artificial pneumothorax is indicated). A further appreciable percentage of patients can be helped by intrapleural pneumolysis when adhesions exist; then, too, there is phrenicotomy and the very useful thoracoplasty. All these recent additions in the way of surgical treatment have been made possible by the irreplaceable X-ray. With frequent use of the X-ray it is now a comparatively simple matter, when considered with present symptoms and signs and previous history to make an early diagnosis of tuberculosis. Where necessary for diagnosis physicians should insist upon a return for further observation in a week, a month, or 3 months, as fits the case. X-ray too, has turned the lungs, at one time an unseen field, into a visible one, making continued true observations of progress a comparatively simple matter. Thus, for the state and its constituent components to get best results in accordance with recent medical and surgical advances in tuberculosis, not only are more beds urgently needed, but the institutions must be staffed by capable physicians and surgeons and contain up-to-date equipment.

In the sparsely populated counties of Michigan, primary education concerning the disease is particularly necessary and too much stress cannot be placed on the slogan, "Let Your Doctor Decide," as in many places the various cults "treat" and "cure" an appreciable share of tuberculous patients. In those localities, too, there still exists marked misunderstandings and dread out of all proportion to facts. In the larger cities, the people as a whole are better acquainted with the possibilities of prevention and cure but unfortunately the doctors and patients are both often discouraged because of the hopelessly long delays in procuring hospitalization, where necessary, for those unable to pay full rates for the long stay usually required.—

R. S. Brachman.

THE A. B. C. OF VITAMINS

The announcement of a new source of vitamin D has been made by the medical research council of Great Britain. Webster and Rosenheim have been reported to have produced the anti-rachitic vitamin by the action of ultra violet ray upon a definite chemical substance, ergosterol. The same workers had also experimented with the growth promoting vitamin A. Their conclusion is to the effect that the proportion present in some liver fats may far exceed that found in cod liver oil which is believed

to be the richest source of this vitamin. The liver oils of salmon and halibut are considered by these workers to be more than a hundred times as rich in vitamin A as cod liver oil. The liver fats of sheep, calf and ox contain ten times as much vitamin A as good cod liver oil, and they are said to be from two hundred to a thousand times as rich in vitamin A as the average sample of butter. The fats extracted from liver are free from the unpleasant odor of fish oils. The low melting point of liver fats greatly facilitates their mixture with other food substances.

On good scientific authority we have another new vitamin which has been designated "Factor 'H'" by its discoverers. "Factor 'H'" we are told is found in raw liver and to a slight extent in dried milk. So far the only need for this accessory food substance is for young trout. With it they grow normally; without it they die.

With apologies to the nutritional chemist, it seems that calories have given way somewhat to vitamins; at least vitamins appear to be occupying the center of the stage. They not only occupy the front page of the newspapers but the magic vitamin has found its way into the literature of the medical charlatan. It also enters into the slogan of the fruit dealer.

There have been many editorial references to vitamins, some even in a spirit of levity. The British Medical Journal makes them a subject for poetry; whether this be levity or sicklied o'er with the pale cast of thought, we will leave the reader to decide. The poem is entitled the A. B. C. of Vitamins.

The scurvy flew through the schooner's crew

As they sailed on an Arctic sea,
They were far from the land and their food was
canned,

So they got no vitamin C,
For "Devil's the use of orange juice,"

The skipper 'ad said, said he,

They were victualled with pickled pork, my dears,
Those marines bold and free,
Yet life's but brief on the best corned beef
If you don't get vitamin C.

Vitamin D is familiar even to the layman through its associations with that unctuous piscatorial cod liver oil. The poet has a word for vitamin E by which the "barren may shake off their sterile curse."

Now vitamins D and A, B, and C

Will ensure that you're happy and strong;
But that's no use; you must reproduce

Or the race won't last for long.

So vitamin E is the stuff for me,
And its praises end my song.

We'll double the birth-rate yet, my dears,
If we all eat Vitamin E,
We can blast the hopes of Maria Stopes
By taking it with our tea.

Doubtless some mute inglorious Isaak Walton will come forth to sing the glories of "Factor 'H'" that hitherto unknown food principle which accounts for the gustatory properties of the trout. With the rest of the alphabet before us what may we not expect?

SCIENCE SERVICE

The majority of the items under the heading, "General News", are supplied by Science Service. The principal object of this institution, which is located at Washington, is to interpret and furnish scientific information to the public. News items are collected and passed upon by competent authorities in the various departments of scientific endeavor, including also medicine and its allied branches. Accuracy is insisted upon rather than the sensational. To obtain the best results the interpreter of scientific truth must combine the qualities of the journalist. The director of Science Service is Edwin E. Slosson, Ph. D., the author of *Creative Chemistry*, which has had a wide circulation. Dr. Slosson has the confidence not only of scientific men, but of all other men and women of culture as well.

Such items of news will appear in the Journal as we hope will be of special interest to our readers. Condensation and variety will be aimed at in the endeavor to produce a readable page.

FURTHER REFINEMENT IN DIAGNOSIS

Dr. J. Forestier of Aix Les Bains, France is known personally to many physicians in this state and his work is known to many more. Dr. Forestier in a recent address reviewed the development of the use of lipiodol injections for X-ray diagnostic purposes. It is six years since Forestier and Secord, working together, discovered the use of lipiodol as a diagnostic agent. It is widely used in the United States at the present time. It is non-irritating to the mucous as well as serous membranes for among the uses it has been put is that of diagnostic aid in conditions encroaching on the spinal canal.

This agent has been used most widely in demonstrating normal or abnormal conditions of the bronchial tree. Forestier described several methods of administration. The usual one is the intra-tracheal. The

injection has been accomplished with children by means of a small curved tube resembling a tracheotomy tube. Another method is destruction of the deglutition reflex by means of local anesthesia so that the act of swallowing sends a mouth full of the oil down the trachea instead of the esophagus.

Lipiodol has been employed in tuberculosis to check up the results of artificial pneumo-thorax therapy. Bronchiectasis is shown very clearly by its use. Extra pulmonary tumors are readily differentiated.

Lipiodol has been employed as an agent in gynecological diagnosis particularly in determining the patency of the tubes in case of suspected sterility, and also in the differentiation of pelvic tumors. Forestier has devised a special instrument for the intra-uterine injection of the oil so as to prevent the back flow. This consists of a syringe nozzle with a shoulder to it which is left in place after the injection while the radiographic exposure is being made.

A third use for which lipiodol injections are employed is the determination of points of compression of the spinal cord. Lipiodol being heavier than the spinal fluid has been found to sink. A globule about 1 c.c. is injected into the cord (cisterna magna) and radiographs made with the patient in the oblique or in the upright position. The point of pressure by a spinal cord tumor may be easily located by radiography.

This radiopaque substance may be used also in diagnostic work on the nasal accessory sinuses. It is a fairly exact method of determining the thickness of the mucosa in cases of long standing sinusitis.

EDITORIAL NOTES

The editor enjoyed the hospitality of the Genesee County Medical Society March the seventh. As is well known, Flint is the home of President Randall, also of the Buick and the Chevrolet as well as one of the most progressive and harmonious Medical Societies in the United States. The scientific meetings of the Genesee County Medical Society are held every second Wednesday noon following a get-together luncheon. After the business and scientific features the members of the Society by mutual agreement take the afternoon to themselves. We presume that later in the season the time is well spent on the golf links. We made no enquiries regarding how the remainder of the day is spent during the winter months. Considering the numerous distractions during the evenings, the midday medical meeting appears to us as an idea that should be widely adopted.

Tuition in the Yale Medical School will be raised from \$300 to \$500 a year. Medicine par-

ticularly in the east bids well to become a profession for rich men's sons. Father having worked his own way through college will now have to work his son's way through. The high cost of medical education will eventually eliminate completely that class who by patient effort and industry entered the ranks of the medical profession, the young man who taught school for a few years to get enough ahead to take a course in medicine. The youth and enthusiasm he brought to school teaching made him of untold value to the community, and the training in teaching and the contacts he made rendered him later of value as a physician.

The report of the commission on medical education January, 1928, contains some very interesting information on the subject we hope to comment from time to time. The commission sent out a questionnaire several months ago to which it received returns from over 1,600 physicians. As these were carefully selected they may be taken to represent a cross section of the medical profession of the United States. These physicians were grouped as follows, first, those who were graduated prior to 1900 or 32 per cent; second, those between 1901-1910 or 38 per cent; and third, those whose graduation was in 1911 or later, 30 per cent. Of the first group 39 per cent are farmers' sons; of the second 30 per cent, and of the third 26 per cent are farmers' sons. It is a significant fact that the farmer still, though in decreasing proportion, continues to furnish the largest number of candidates for medicine of any single calling. Doubtless the urbanization of our population accounts for the progressive decrease of farmers' sons entering medicine.

OUR SENTIMENTS, TOO

(Southern Medicine and Surgery)

In order to keep up with medical progress, let us apply to ourselves Bacon's famous saying, "Reading maketh a full man, conference a ready man, writing an exact man." It is absolutely necessary to read a few good medical journals. Most of their articles are summarized at the end, and this gives a clue to their value. With many, this summary is all that one needs to read. Others will bear reading carefully, and once in a great while one will bear repeated readings. The book salesman is a frequent reminder of current medical publications. My advice is to give him a hearing, but not to buy too many books. To quote Bacon again, "Some books are to be tasted, others to be swallowed, and some chewed and digested." For my part, I prefer monographs to systems of medicine, which are usually too bulky and cumbersome for ready reference, besides being so long in gestation that when issued many of their articles are behind current opinion.

One plea I would like to make to my medical brethren is that they do not confine their reading to medical subjects alone, but devote at least half an hour daily to reading something absolutely foreign to their work. If this be done just before retiring, it will help to invite slumber to one's pillow.

As to conference, it may be obtained in several ways. Every doctor should attend all medical societies possible, and at least once every year or two take off from one to four weeks to browse around medical centers.

The third part of Bacon's observation is absolutely true, as any man who has ever really

"worked up" a paper upon any subject can testify. It is surprising how much clearer one's knowledge of a subject becomes after an honest effort is made to put it into written words that are easily understood by others. Any one who will try writing at least one paper a year will never regret it. And I believe that in lecturing any doctor will learn more than he will teach.—From a prize essay by Dr. Wm. Johnston.

APRIL TWENTY-FIVE YEARS AGO

(From the Journal of the Michigan State Medical Society)

Dr. R. W. Gilman contributed a paper on Intra-tympanic Injections of Pilacarpine in Chronic Catarrhal Deafness. Dr. W. F. Metcalf wrote on Treatment of Puerperal Sepsis. Dr. H. O. Walker, on Observations upon the Technique of Abdominal Surgery; Dr. Earl Bingham of Grand Rapids, on Uremia in the Process of Child Bearing; Dr. Chas. D. Aaron, Detroit, on Enteropneumosis and Pregnancy. Dr. Leartus Connor wrote two editorials, one on County Societies and Public Questions, the other on the Medical Society Habit. The matter of medical registration occupied a prominent place at this time. This number of the Journal contained a letter from B. D. Harison on the Nottingham Bill. There was also an article by A. N. Collins with the following significant title, "Is the General Practitioner Fairly Paid, If Not, Why Not?" Dr. S. E. Sanderson discussed the subject, "Gastroenterostomy" with special reference to the McGraw Elastic Ligature.

DEATHS

DR. E. L. EMMONS

Dr. E. L. Emmons of Detroit died on February 24th from cerebral hemorrhage. The doctor was born at Elsie, Mich., in 1869. After attending the schools of his home town he entered the Detroit College of Medicine whence he was graduated in the class of 1893. He had been in active practice in Detroit until his death which occurred in his 60th year. He was a member of the Wayne County Medical Society, the Michigan State Medical Society and the American Medical Association. He was also a prominent Mason, being a member of the Michigan Sovereign Consistory and also Moslem Shrine.

MRS. EDWARD BERNSTEIN

Mrs. Edward Bernstein, wife of Dr. Edward Bernstein of Detroit, died on March 14th. Mrs. Bernstein was a native of Baltimore, Md., and had completed the requirements for a medical degree and subsequently engaged in practice in her native city. Following her marriage to Dr. Bernstein thirty years ago, she gave up practicing medicine. Dr. and Mrs. Bernstein lived in Kalamazoo for twelve years prior to coming to Detroit in 1927, where Dr. Bernstein has been in practice since. Mrs. Bernstein was a frequent attendant of the Wayne County Medical Society along with her husband. Besides her husband she is survived by two sons, U. P. and J. E. Bernstein.

SURGERY SEPARATES INCOMPLETE "TWINS"

A successful operation on what might be called incomplete Siamese twins has just been reported to the medical journal *Lancet*, London, England, by Sir John Bland-Sutton. An account of the case was sent to Sir John, himself a consulting surgeon at the Middlesex Hospital, by a medical correspondent in India. Attached to a Hindu boy baby at birth was a parasitic "brother" possessed of the full complement of limbs but minus head, lungs and heart. A month after birth the parasite was growing rapidly so that the parents sought surgical aid for the relief of the child. The operation was performed and when last heard from the child was well and developing normally. Such cases, declared the British surgeon, should encourage surgeons generally to separate conjoined twins and spare the fully developed individual, not only life of bondage, but the ignominy of being exhibited in public shows.—Science Service.

Erysipelas may now be added to the list of diseases vanquished by man, Dr. Konrad E. Birkhaug of the University of Rochester School of Medicine, told the American College of Physicians meeting at New Orleans. As a result of four years of work, Dr. Birkhaug has developed an antitoxin treatment for use in the early stages of erysipelas that gives results commensurate with those obtained through the use of diphtheria antitoxin in the early hours of that disease. The erysipelas treatment reduces to half the time that the patient must spend in the hospital, Dr. Birkhaug told the doctors. The mortality in adults has been reduced from 12 to only four per cent, while recurrent attacks of erysipelas have been prevented through a course of immunization through the use of toxin. Dr. Birkhaug observed in 1924 that nine-tenths of the streptococci associated with the disease were of a specific type. This form of organism had been suspected of the crime of causing erysipelas when it was discovered in the lesions of the disease in 1881. The production of the disease experimentally in animals and their protection with a specific antiserum confirmed Dr. Birkhaug's idea that the particular kind of streptococci observed was the cause of the disease. The next year he discovered the toxin produced by the streptococci and then in 1926 erysipelas antitoxin was produced. The evidence for erysipelas specificity has been confirmed by other laboratories since Dr. Birkhaug's pioneer work.—Science Service.

I often wonder, if I didn't know English, what I should think of the sound of it, well talked. I believe I should esteem it a soft speech, very pleasant to the ear, varied but unemphatic, singularly free from guttural or metallic sounds, restful, dignified, and friendly. I believe—how prejudiced one is!—that I would choose it, well spoken, before any language in the world, as the medium of expression of which one would tire last. Blend though it be, hybrid between two main stocks, and tintured by many a visiting word, it has acquired rich harmony of its own, a vigorous individuality. It is worthy of any destiny, however wide.—John Galsworthy.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. John Sunwald, professor of hygiene, public health and physical education at the University of Michigan, was elected president of the Michigan Public Health Association at the seventh annual meeting at Lansing, Mich.

"In many of the simplest matters no physicians, or surgeons can give advice based on scientific knowledge, even if they hazard opinions based on earnest but uncontrolled observations. It is not yet scientifically known, for instance, how much water a man should drink in the day, or what is the best kind of bread to eat. It is for those who have the most reason to know the public value of this kind of knowledge to persuade public opinion along the only secure path towards it, namely, the timely and liberal support of scientific investigation."—Medical Research Council.

A new type of dark glasses for outdoor wear at tennis, golf and other sports, and said to be especially useful for auto drivers at night when meeting cars with glaring headlights, has been produced in the optical works of the Zeiss firm at Jena, according to Science Service. The basis for the new eye protection consists of two wedge-shaped pieces of glass fused together. The upper member of the pair is made of a dark, gray-brown glass, while the lower part is clear and uncolored. Goggles made from this material are thus very dark at the top, shading off gradually into clear glass at the lower edge. Motorists, encountering glaring headlights, simply duck their heads a little and look through the tops of their goggles until the offending car has passed, when they again make use of their normal vision through the lower parts of the glasses.

Eye, ear, nose and throat doctors of the world will meet for the first time at the First International Congress of the Oto-Rhino-Laryngological Society, to be held in Copenhagen, Denmark, July 29 to August 1. That was the announcement made today by the American Committee of the Society, 25 Broadway, New York. More than seventy-five specialists will represent the United States at the Congress. These doctors will also spend some time visiting at various large cities in France, England, Germany, Norway and Sweden. Clinical discussions will be held in these countries with European doctors presiding. The Congress will concern itself with questions relating to the treatment of the many maladies, injuries and infections of the eye, ear, nose and throat. It has been reported from abroad that very successful methods have been found for sinus trouble and middle ear deafness.

An attack on cancer is being made by high frequency electricity, close in wavelength to the short waves that have recently been found so effective in radio communication. The researches conducted by the U. S. Public Health Service under the direction of Dr. J. W. Schereschewsky with his laboratory at the Harvard Medical school, have been in progress at intervals during

the last five years and have now been informally reported to a congressional committee in connection with a request of an appropriation of \$5,000 to provide assistants and materials for the work. Experiments so far have been confined to mice and chickens. Much progress must be made before there can be any possibilities of applying the results to human beings. Mice with tumors artificially acquired in the laboratory were improved by being subjected to doses of oscillating electricity produced by vacuum tubes similar to those used in radio sets.—Science Service.

The New York Academy of Medicine will hold its first "Annual Graduate Fortnight" October 1 to 13. The general subject of the work will be, "The Problem of Aging and Diseases of Old Age." Not only will the diseases and management of old age be discussed, but attention is to be directed toward the prevention of premature and postponing of normal aging. Diseases of the heart, and affections of blood pressure and kidneys will be studied under the guidance of men of national and international reputation. By concentrating all the available knowledge and experience on a single problem each year, it is believed the greatest benefit to general practitioners and specialists as well, can be secured. The coming sessions will devote considerable time to pointing out the effect of wrong modes of living. Aging, as it relates to health insurance, and to economic and industrial problems, is to be included in the curriculum.

The grand cross, the highest rank of the Legion of Honor, has been conferred on Dr. Albert Calmette of the Pasteur Institute, who has developed a preventive vaccine treatment for tuberculosis. Some 52,772 children have been vaccinated at birth in Paris and the provinces since July 1, 1924, when the vaccine was first put at the disposal of physicians, Dr. Calmette told members of the Academy of Medicine. Cards of 5,749 vaccinated infants born in tuberculous surroundings are kept in the Pasteur Institute files for record and observation. Infants in the group under one year of age present a mortality of 3.1 per cent, while that of unvaccinated children was 8.5 per cent, the scientist pointed out. The general mortality, he declared, had been reduced more than 50 per cent. Among the children who have been vaccinated that have reached the ages of from two to three and a half years, he added, the tuberculosis deaths have been practically nil. The vaccine is administered at birth and a second dose, from the Pasteur observations, seems to be unnecessary.

A family in which the male tendency is so strong that for four generations not a daughter has been born, has been discovered in San Pedro, Calif., through records reported to the Eugenics Records office. No daughters have been born in the four generations, although there have been thirty-five sons. The founder of the American branch of this family was born in Germany, the youngest of nineteen boys. He, in turn, had twelve sons. Out of these, one married an Eng-

lish Canadian woman. They had one son, who married and had three sons. Chance as the sole explanation of this continued production of male children only is considered to be highly improbable. One hypothesis advanced is that the female embryos are early destroyed by some hereditary lethal factor carried by the family from generation to generation. Dr. C. B. Davenport, director of the Eugenics Records office, is making a study of such one-sex families in an effort to determine their cause and he would welcome reports of other such families. Male families would, of course, immediately die out if normal families did not exist for furnishing wives to the male strain.

According to Science Service the healthiest year in history was 1927. Only 8.4 deaths for every 1,000 persons is the record for a group of insured wage-workers that numbers one-seventh of the total population of the United States and Canada. If the death rate of 1926 had prevailed, 8,808 persons among the insured group now living would have died, and if the rest of the population improved its health as much, some 50,000 lives were saved. If the death rate of sixteen years ago, 1911, had not been reduced 33 per cent to the present figures, last year's death list would have numbered 72,570 more among the insured group. These facts are shown by the statistics of the Metropolitan Life Insurance Company reporting the mortality of its industrial policyholders which has been found to reflect the trends of the whole population. The outstanding health fact of 1927 was the big drop in the tuberculosis mortality, the rate of 93.5 per 100,000 representing a decrease of 4.8 per cent from the previous minimum of deaths from the great white plague. Three of the diseases of childhood, measles, scarlet fever and whooping cough, had encouragingly low death rates, while influenza and pneumonia reached unexpected low records. Never, except in the years immediately following the big influenza epidemics of 1918 and 1919, has there been as big a drop in the number of deaths from these much dreaded plagues.

TRI-STATE MEDICAL SOCIETY MEETS IN DETROIT APRIL 10

The Northern Tri-State Medical Society meets in Detroit April 10th. This is its first appearance in Michigan in three years, and in Detroit in several times three. For now fifty-five years a large group of medical men recruited chiefly from the smaller cities and larger towns of these three states, Michigan, Ohio and Indiana, have met in a rotating sequence in location. This is Michigan's year and Detroit has been selected as an ideal host and an ideal location for 1928. The Society is organized on a purely non-political basis and spends itself on an annual, one day, intensive series of clinics. The business of the organization is disposed of in very short order, consuming for the year not over half an hour. The remainder of the day and evening is then given over to purely scientific discussions, papers and clinics. This year the clinics commence at 8:30 a. m. and finish at 10:30 p. m. The capstone of a very remarkable edifice of talent, recruited from the three states, is an evening address by surgeon Dr. Elliott G. Cutler of Cleveland, Ohio. This address is to be presented before a joint meeting of the Northern Tri-State Medical Society and the Wayne County Medical Society, and is to be delivered in the Hotel Statler at 8:30 p. m.

Much of the work presented is to be entirely original, and some of it has never been presented before a general medical society before. Especially notable is the work done and presented by Mertz of Indianapolis, FitzGerald of Toronto and Collier of Ann Arbor.

Membership in the Tri-State organization is open to all members in good standing in the Michigan State Medical Society. The fee for membership is a nominal one of \$2.00. All members of the State Society are invited to join, and their presence will be exceedingly welcome at all the clinics and demonstrations whether they are members or not. The program will be found in full in the March number of the Journal of the Michigan State Medical Society.

EXPERIMENTAL MEDICINE AND SURGERY

When Hurley Hospital is completed, when our new medical auditorium is furnished, and when our medical library is properly housed, we will have many things which will make for medical progress in Flint. There is still one thing that is urgently needed and which would prove of inestimable value. We should have somewhere near Hurley Hospital, a proper institute for experimental medicine and surgery. There should be a building with sanitary quarters for experimental animals, an aseptic operating room, as well as laboratories for chemistry, bacteriology and pathology.

It is desirable that our young surgeons should acquire skill and dexterity by doing dog surgery. All present day masters of this art have acquired much of their skill in this way. Dr. Chevalier Jackson perfected himself in the technic of bronchoscopy by using dogs. Everyone knows of the thousands of lives he has saved by his unusual skill. In teaching this subject at Philadelphia, he makes use of dogs. At present, courses in dog surgery are given only at large medical centers and large fees are charged for such instruction. This work could be done just as well at home. Surgery is not the only specialty to be benefited by such a place. Physiology and pharmacology depend just as much on such methods for progress.

A contribution of \$50,000 from one of Flint's many millionaires would make such an institution possible. No one can estimate the returns possible from such an investment for no one can set a value on a human life.—From the Genesee County Medical Bulletin.

Chickenpox may be added to the list of diseases that can be prevented by vaccination. Dr. Jean V. Cooke of the Washington University School of Medicine at St. Louis, Mo., has reported to the recent meeting of the American College of Physicians that inoculation of exposed children with serum from convalescent patients has successfully prevented cases of both chickenpox and measles. Though the former is sufficiently mild a disease not to require general protective measures, its appearance in epidemics in institutions causes considerable difficulty, especially in the very young children affected. The preventive treatment for measles, said Dr. Cooke, should be concentrated on account of the danger of complications on infants and young children under five years of age. Results with this method show, he stated, that almost 90 per cent of children given convalescents' serum during the first week after exposure fail to develop the disease.—Science Service.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EDITOR: Frederick C. Warnshuis, M. D., F. A. C. S.

Secretary Michigan State Medical Society

Four Day Medical and Surgical Clinic

Detroit, May 14, 15, 16 and 17

PRELIMINARY ANNOUNCEMENT

We are very elated over being able to submit to our members a preliminary announcement of the Four-Day Medical and Surgical Clinics that will be conducted in Detroit, May 14, 15, 16 and 17. This Clinic is being tendered to the profession by reason of the collaboration and activity of the Wayne County Medical Society, the Alumni of the Detroit College of Medicine and Surgery, and the Graduate Department of the School of Medicine of the University of Michigan. It will be the first Clinic given under the new Post-Graduate Instruction program of the Michigan State Medical Society.

We have no hesitancy in stating that this will be the biggest and best medical and surgical clinic ever held in Michigan. As such it merits the support of the profession of the state. There is not a member who can afford not to attend. It presents an opportunity to obtain present-day theories and practices imparted by a most commanding list of recognized clinicians and authorities. These speakers are virtually bringing their clinics to Detroit, enabling you to hear and see them during a period of four days for a minimum expenditure of time and money. We urge you note the dates and plan to be present. Detailed announcements as to subjects and time will be imparted in the May number of The Journal—watch for it.

It is not amiss at this time to comment upon the fact that this announcement is part of the Post-Graduate Instruction Program of our State Medical Society. For more than ten years the State Society has concerned itself with providing educational programs for its members. Commencing with clinic teams that were organized and available for County Society meetings there followed regional meetings which in turn were succeeded by the Councilor Dis-

trict Conferences. To these there were initiated the University Hospital Clinics. During the past two or three years the matter of a Post-Graduate School at the University was suggested and several conferences were held. These resulted in the announcement made last fall of the establishment of the Department of Post-Graduate Medicine by the Regents.

It is therefor apparent that your officers are gradually developing a program and policy that will provide within the boundaries of our state educational opportunities for our membership. It is intended to make available clinics and study courses that will enable every member to obtain educational opportunities equal to any in this country. It is to be a feature of our organizational existence. If one refers again to the minutes of the last meeting of the Council information will be acquired as to the plans that are being executed for the present year. This Detroit Clinic is the opening number—others are to follow. In addition plans are about ready, and will be announced in May, for an extended series of Councilor District Conferences. Further comment will accompany such announcement. In the meantime plan to be in Detroit May 14-18 when the following clinics will be conducted:

Alexander, John, M. D., Department of Surgery, University of Michigan.

Bagg, Halsey J., Ph. D., Memorial Hospital, New York City—"X-ray and the Alteration of the Germplasm."

Blain, Alex. W., M. D., Jefferson Clinic, Detroit—"Direct Blood Transfusion."

Birkelo, C. C., M. D., Detroit.

Campbell, Alex. W., M. D., Grand Rapids, Michigan.

Corbus, B. R., M. D., Grand Rapids, Michigan—"The Argument for the Medical Treatment of Peptic Ulcer."

Coughlin, Wm. T., M. D., Department of Sur-

gery, St. Louis University—"The Modern Treatment of Trigeminal Neuralgia Major and Its Cure Under Local Anesthesia."

Crile, Geo. W., M. D., Cleveland, Ohio—"Factors Which Control the End-Results of Operations on the Gall-Bladder and Thyroid Gland."

Crotti, Andre, M. D., Columbus, Ohio.

Davis, James E., M. D., Detroit College of Medicine and Surgery.

Dickinson, G. K., M. D., Jersey City, N. J.—1. "Some Points about the Liver, Particularly in its Relation to Surgical Work"; 2. "The Education of the Physician."

Furniss, Henry D., M. D., New York City—"Post-Operative Renal Infection."

Hedblom, Carl A., M. D., Chicago, Illinois—"The Surgical Treatment of Pulmonary Tuberculosis," including a clinic.

Hickey, P. M., M. D., University of Michigan.

Kellogg, Foster S., M. D., Boston, Mass.

King, James E. M. D., Buffalo, N. Y.—1. "Carcinoma of the Cervix"; 2. "A Discussion of the Pathology of the Appendix."

Kiefer, Guy L., M. D., Lansing, Michigan, Commissioner of Health.

Lower, William E., M. D., Cleveland, Ohio.

Maccallum, A. B., M. D., Faculty of Medicine, University of Western Ontario—"The Recent Advances in Knowledge of the Fat Soluble Vitamins."

Marshall, W. H., M. D., Flint, Michigan.

McKean, Richard M., M. D., Detroit, Michigan.

McPherson, Ross, M. D., New York City.

McVicar, Chas. S., M. D., Mayo Clinic, Rochester, Minn.

Mendenhall, A. M., M. D., Indianapolis, Ind.

Miller, Harold A., M. D., Pittsburg, Pa.

Martinez, D. R., M. D., Pittsburg, Pa.

Mortensen, M. A., M. D., Battle Creek.

Porter, Miles F., M. D., Fort Wayne, Indiana—"Ileus."

Rucker, M. Pierce, M. D., Richmond, Va.—"The Use of Lipiodol in the Early Diagnosis of Pregnancy."

Sloan, E. P., M. D., Bloomington, Ill.—"Two Kinds of Toxic Adenoma," with remarks on our diagnosis and treatment.

Smith, Richard R., M. D., Grand Rapids, Michigan.

Speidel, Edward, M. D., Louisville, Ky.—"Obstetrical Emergencies in the Home."

Stone, Wm. S., M. D., Memorial Hospital, New York City—"Malignancy."

Watkins, John T., M. D. and Cumming, R. E., M. D., Detroit, Michigan—"Significance of Ureteral Stricture in Relation to Abdominal and Other Symptoms," (Illustrated.)

DR. JONES

Upstairs

We have read anew, in a contemporary journal, the narrative that to us has conveyed a tender pathos:

"What of the country doctor?" you ask.

"I haven't forgotten him. Whenever the country doctor is mentioned, I think of staunch old Doctor

Jones. Maybe his name wasn't Jones. It might have been Miller, or Brown, or Smith. But what does the name matter, for the world did not even know him when he lived?"

"Old 'Doc' Jones was a village doctor in Ohio. With his old mare and rusty buggy he scoured the whole countryside about, through spring mud that slushed up to his axles, through snow, through rain, and scorching days of mid-July. Sometimes he collected a dollar for a visit. Just as often the dollar went down in the old doctor's book. He never claimed to be much of a business man, and his landlord swore that 'Doc' Jones was a full year behind in his rent.

"Many a broken bone old 'Doc' Jones set while a gaping farm hand held the kerosene lamp for him to see by. Many a blizzard he braved with that tired, sleepy mare to bring a new baby to town. Many a shabby account book he filled with many an entry of unpaid fees, only to toss the book eventually into a cluttered drawer to let the dust of years seal it forever. And after forty-seven hard years of practice he died—at his desk, his hoary head cradled in his arms while he snatched a mite of sleep in his dingy little office on the second floor.

"The whole village, and folks from the hills and valleys for twenty miles about, turned out for the funeral. A few of those who knew raised a little fund among them to pay for the cemetery plot and the plain oak coffin. The fund wasn't sufficient to buy a monument.

"But after the others had all gone, and the humble grave had been filled, one mourner lingered there alone. He was the new young doctor who recently had come to the village. He stood, head bared and bowed, before that unmarked burial spot.

"Presently he left to return with a weather-beaten, faded bit of oblong board on which a message in dim gold letters was still distinguishable. It was the sign which for almost a half century had directed the ailing and sick to the office on the second floor. And that, as a monument, he placed reverently on the mound of fresh earth:

Doctor Jones

Upstairs

What finer epitaph could any man want? Who could write a nobler elegy?

So has the profession ever served—service rendered in that spirit, unmindful of monetary rewards or returns. Disregarding the economic problems and shifting scenes of social and business life has no doubt been a potential factor causing much of our unpreparedness to cope with movements that have encroached upon present day practice. We are not advising relinquishment of service ideals—we urge rather that we cling to those ideals with greater tenacity, exemplifying them as did Dr. Jones. Let it never be charged that we worship wholly at the shrine of dollar idolatry and that the size of our golden calf attests to our capabilities. Service must come first—efficient service—and then having so served we are rightly justified to monetary rewards and are justified in

insisting and demanding that we be paid in full and promptly.

We are digressing from what we started out to write—so back to our text. As a profession we are ready to serve and to be able to serve most efficiently. We individually and collectively are expending time, money and energy in remaining abreast of medical progress. Our society and our county units are holding meetings, conducting study courses in order that our service may reflect the greatest efficiency. We are also seeking to enlighten the public as to the truths of scientific medicine in order that the individual may know how to prevent as well as relieve physical afflictions. Having done so we feel that we have placed the responsibility of securing such service upon the individual and that as a rule, he has no right to shirk that responsibility by expecting that medical advice and attendance be provided him by clinics, welfare chest funds, or the earnings of endowment funds of hospitals unless he be in abject destitute circumstances. He has been lead to so expect and so receive because of the many free clinics that have been established most inadvisedly and often with the aid and approval of doctors individually or in small coteries. Clinics have multiplied and multiplied so that there is no denying that a veritable clinic evil and problem exists—an evil that is imposing upon doctors, a problem that is undermining individual independence and responsibility. The individual is responsible for his taxes, food, clothes, education, home; then why should he not be equally responsible for his health and physical welfare? He pays for advice and service in matters of law, finance, architecture, engineering, farming and similar professions and trades, why single out medicine or his physical well being and say to the individual—we, a clinic, will relieve you of that responsibility and expense. In religion, or soul welfare he receives nothing free—he pays to be baptized, receive religious instruction, to be married, to go to church on Sunday and to be buried—why should he not reasonably pay for medical advice and service? Why should clinics assume that responsibility for the individual?

We therefore hold that the last straw has been added to our burden and that from now on a concerted movement must be directed to curb and lessen this clinic evil and abuse. To that end we are purposing to direct some of our study, thought and effort. We invite suggestions and guidance. We shall have more to say just as

soon as we have completed certain investigations and compiled certain facts.

DUES

Under provision of our by-laws and also by resolution of the House of Delegates all members whose dues are unpaid on April 1st are placed on the suspended list. To prevent such suspension we urge County Secretaries to exhibit increased effort to remit their members' dues by April 1st.

AID

During the month a letter has been addressed to every County Secretary requesting that he impart the outstanding problems of his Society and members and to indicate wherein we may be of assistance in solving these problems. We can help only when we know your needs. It was the purpose of the Council in relieving the Secretary of the Editorial duties that more thought and time might be devoted to organizational work. That is our purpose, still we cannot so serve unless you indicate the avenue. So please let us have your recommendation.

THAT YOU MAY KNOW

The enforcement of our medical practice laws has ever been a subject of much misunderstanding. The following letter from the Detroit Department of Health's special investigator imparts pertinent information. Pending the enactment of new legislation would it not be the apparent duty of health officers elsewhere to follow the Detroit plan? Is not an incompetent cultite and pseudo-doctor as great a health menace to a community as is chicken pox or impure milk? We ask you?

March 7, 1928.

Dr. Frederick C. Warnshuis, Secretary:—

I am just in receipt of your letter of inquiry regarding the investigations of violations of the medical act in Detroit and requesting information as to how we operate.

In the introduction of the registered nurses as public health nurses in the field it was found that many complex cases came to their attention which because of their complexity needed special attention. The division of Special Investigation of the Department of Health was then organized and such special cases were referred to this division. I was made director and have functioned as such ever since.

It soon became apparent that among the various other cases that came to our attention were those regarding the illegal practicing of medicine and since then we have become thoroughly con-

vinced that the eradication of the quack and the illegal practitioner is a proper function of the Department of Public Health, as much, if not more so, than any other branch of public health activity. We believe it is the duty of the health department to see that the public receives proper medical attention not only in the treatment of contagious diseases but in every other case, so we took upon ourselves the prosecution of illegal practitioners as one of the functions of this office.

At first we limited our services to people who complained about treatment they had received from various quacks and illegal practitioners. We saw that proper warrants were drawn up; that the warrant was sworn to properly; that the illegal practitioner was arrested; that the case was properly prepared before going to court; set in during the trial, and assisted the prosecuting attorney in the prosecution, the same as any police officer in the prosecution of any other criminal.

The prosecuting attorney of any county, of course, will prosecute any complaint that comes before him but he is usually without the machinery to make investigations, prepare evidence, dig up the witnesses and properly prepare the case for prosecution. In other criminal cases this is usually done by the police department or sheriff's office. We felt that inasmuch as the eradication of the illegal practitioner of medicine was a function of the health department, we should assist the prosecutor in the preparation and prosecution of these cases. This has been done in Detroit since my appointment to the office.

It soon became apparent that there were many practicing against whom no complaint was made due to the fact that in some cases the people were ignorant and in others no serious damage had been done to the patient, but who were still a menace to public health. We then found it necessary to send out people who would act as patients and, of course, it was necessary to furnish them with sufficient funds to at least pay for the initial treatment. These investigators were usually employees of the health department working in some other division.

In my first campaign against chiropractors operating illegally in Detroit, I ran up a bill of about \$75.00 which I presented to the county for payment, the same as any other investigation made by the police department of the City of Detroit, but which they refused to pay. The City of Detroit, through the controller, declared that it was a matter for the prosecuting attorney and that the City of Detroit could not appropriate any money for these investigations and prosecutions. I then had a conversation with Dr. Frank Kelly of the Wayne County Medical Society and he assured me that the Society would be glad to furnish the funds for the prosecution of illegal practitioners in Detroit and since that time they have from time to time furnished these moneys.

I am of the opinion that the State Board of Registration in Medicine, who are charged with the responsibility of licensing and enforcing the law, should be furnished with a sufficient number of investigators and also with moneys for the proper enforcement of the Medical Practice Act within the State of Michigan, as I believe that outside of Detroit, perhaps Grand Rapids and a few of the larger cities, the health departments would be unable to secure sufficient help to carry on these investigations.

The cases reported in the Wayne County Bulletin are only a part of the cases which were prepared and prosecuted by this office during the

past year. Many cases came to us through patients who had received injurious treatment and who complained to us.

If there is any other phase of this work about which you would like information, I will be glad to furnish same upon request.

Very sincerely yours,

John F. Roehl,
Special Investigator.

WAYNE'S TELEPHONE DIRECTORY LISTING

There is evidently considerable misunderstanding regarding the funds that were expended to aid the Wayne County Medical Society to publish a list of its members in the Detroit telephone directory. In order that the facts may be clear we are publishing a copy of a letter that was sent to Councilor Urmston for the information of the members of the Bay County Society:

March 7, 1928.

Dr. Paul R. Urmston, Councilor:—
Davidson Building,
Bay City, Michigan.

Dear Dr. Urmston:—

Thank you for your letter of March 6th which cites the specific instances that caused the Bay County Society to voice their protest relative to certain expenditures of our State Society and make particular reference to the contribution given to the Wayne County members for defraying the expense of listing their names in the telephone directory, and also a contribution to the clinical bulletin of Wayne County. I am quite sure that your members are not in possession of the absolute facts and that when these facts are presented to them that they will glean a new viewpoint of the situation. I shall try to impart these facts in this letter.

If your members will refer to the November Journal on page 687 they will note the official action of the Executive Committee, and then if they will refer to page 690 of the same issue and read the editorial on "Medical Guidance," particularly the latter part of the editorial, further information will be imparted.

Now, the facts are these—that we have approximately 1,400 members in Wayne County who have paid their annual dues of \$10.00 per member causing the Society to receive an annual collection of dues from Wayne County of \$14,000.00. As you know for the past four years we have been conducting a series of Post-Graduate Conferences and provided speakers for County Society meetings, outside of Wayne County. This has been part of our educational program and with the approval of the House of Delegates an appropriation of a little better than \$6,000 was made to defray the expenses of speakers, rental of halls, traveling expenses, etc., of these conferences and special meetings.

In checking over our financial expenditures it is definitely shown that out of the annual dues paid by a member, the members outside of Detroit have been receiving approximately \$2.00 per member from this educational and post-graduate program. During these four years we have ex-

pendent no money in Wayne County. All our expenditures have been without the boundaries of Wayne County and for the benefit of members in the other counties of the state and the Upper Peninsula. I have during that period of time felt several times that we owed something to Wayne County and the members, who were paying the same dues as the members throughout the state, but were not receiving these special privileges and benefits that were being accorded to the members of the state. Upon two or three occasions I appeared before the Wayne County Medical Society Council and asked them how the State Society might be of assistance to the members of Detroit. The reply had been invariably, "it is not what the State Society can do for its members in Detroit, but what more can the members in Detroit do for the State Society and the members throughout the state." This has been a most admirable spirit and has characterized the attitude of Wayne County to the rest of the profession in the state during the past four years.

Now last fall under the regime of the new officers of the Wayne County Society an appeal was made to the State Society for some assistance and help in a plan that they were desirous of instituting; namely, the listing of its members in the Detroit telephone directory. Please bear in mind that during the past four years we received some \$56,000 from the profession in Detroit from which they received only the Journal and the medical legal protection, just as do all other members. Now they were in need of a contribution or some assistance and in reviewing the above facts, and also taking into consideration the fact we were expending nothing in Detroit, but were expending approximately \$2.00 per member over and above the medical legal protection and the Journal throughout the state; also considering that because of a peculiar situation in Detroit this listing would be of material benefit to the entire profession in Detroit, the Executive Committee and the Finance Committee of the Council felt that a contribution of \$1.50 per member for Wayne County would not be unreasonable and would reflect our activity in Wayne County in a desirable way. The Council therefore took this action and made a contribution of approximately \$2,000 to Wayne County to defray this telephone listing expense.

I think that if you reflect and the members of the Bay County Society also reflect, that \$2,000 spent in Wayne County in a period of four years is a very small return to the members who have paid to the Society some \$56,000. This is by no means a positive and permanent contribution, but as was definitely stated was a temporary assistance. Had we treated the members in Detroit the same as we have done with the other members throughout the state and provided clinical material, speakers and post-graduate meetings, our expense in Detroit during these four years would have been in the neighborhood of \$12,000 whereas we have only expended \$2,000. Does not this appear to be just and fair?

Now let me add this, that by reason of this listing in the Detroit telephone directory of reputable members of the profession who are members of Wayne County Medical Society and the announcing of this plan to the profession of Detroit, caused an increase in Detroit membership of something like 300 members so that we received a little over \$3,000 more in dues this last year than we received from Detroit before; because these new members have been ones who

were cold and not affiliated but when they saw the benefit of this listing they hastened to join the Wayne County Society so that the State Society received approximately \$3,000 more in funds from the Wayne County Society than we had in previous years and we only expended something like \$2,000. So in the final analysis the State Society is a little better than \$1,000 to the good on the plan. May I not ask you if this is also not a desirable feature and justifies the action taken?

In regard to the Bulletin contribution—this must not be mistaken or confused with the Bulletin of the Wayne County Medical Society. The Bulletin of the Wayne County Medical Society is entirely a separate proposition and the expense of editing is defrayed by the Wayne County Society just the same as the bulletins of the Kent County Society, the Genesee County Society and some of the other counties who publish a bulletin. The bulletin referred to, for which a contribution was made, is the Clinical Bulletin published under the auspices of the hospitals of Detroit by the Clinical Committee of the Wayne County Medical Society. This bulletin is nothing more than a listing of daily operations, clinics and medical meetings that are being held in the several hospitals, by special societies and groups of doctors.

The bulletin imparts this information for the benefit of the members in Detroit and also for visiting doctors from the state who may be in Detroit on business or for some clinical work. It enables a doctor to know what clinics are being held that day, and what meetings are being held so that he may determine how he may best spend his time at the various hospitals and clinics in Detroit. The expense of this bulletin is defrayed by contributions made by the hospitals of Detroit and some of these clinics, but last year they had a deficit because of the expense entailed in the printing and distribution of this bulletin and it was to help cover this deficit that the contribution was made. The Executive Committee and the Finance Committee rightly considered that this was justified as part of our program of post-graduate work.

Unless one is familiar with the facts he does not realize just how many doctors visit Detroit for a day or a week, who are anxious to avail themselves of the clinic work that is going on. Previous to the publication of this bulletin they encountered much difficulty in finding out what clinics were being held, what work was being done and so they lost much time and also missed some special work because they were unable to obtain the information. This information is now obtainable through this bulletin which is free to any doctor and may be secured at the Wayne County Medical Society headquarters as well as at the various hospitals in Detroit and is available by five o'clock in the afternoon covering the following day's work.

It must be apparent that this is an educational measure that may well be supported by the State Society, inasmuch as doctors throughout the state benefit by it.

I trust that the above explanation places a new light upon the situation and will impart to the members in Bay County more accurate information, and after having secured this information I am still wondering if it is their desire to officially voice their protest and record it in the resolution that was sent to me.

With personal regards, I am

Yours very truly,

F. C. Warnshuis, Secretary.

WAYNE COUNTY

The following is a tentative program of the Wayne County Medical Society for the month of April:

April 3—General meeting. Address, "Basic Sciences as a Prerequisite for Medical Registration." W. C. Woodward, M. D., Executive Secretary, Bureau Legal Medicine and Legislation, American Medical Association.

April 10—Medical Section. Joint meeting with the Northern Tri-State Medical Society. "Post Operative Complications." Elliott C. Cutler, M. D., Western Reserve University, Cleveland, Ohio. Statler Hotel ball room, 8:30 p. m.

April 17—General meeting. Historical papers.

April 24—"Why a Medical History of Michigan", C. B. Burr, M. D., Flint, Mich.

Surgical section, "Gynecological Patients", Arnold Stermdorf, M. D., New York City.

MONROE COUNTY

At the October meeting of the Monroe County Medical Society, the following officers were elected: President, H. L. Meck, Dundee; Vice-President, D. C. Denman, Monroe; Secretary-Treasurer, Florence Ames, Monroe.

Monroe County has been fortunate in having some very interesting and practical addresses at recent meetings. On October 21, 1927, Dr. Wm. Fowler, of Detroit, spoke on "The Tonsil Question Again and Common Colds Too Common."

On November 17, 1927, Dr. Don M. Griswold, Deputy Commissioner of Public Health, presented the subject of "Scarlet Fever Immunization." January 19, 1928, Dr. H. H. Cummings of Ann Arbor talked about "Some Common Complications of Obstetrics."

Monroe County Society has several new members: Dr. L. J. Rubley, of Monroe, transferred from Lenawee County, and Doctors Sara Long, R. T. Ewing, L. C. Blakey of Monroe, and Dr. J. H. McMillin of Dundee, voted into the Society January 19, 1928.

Florence Ames, M. D., Secretary.

LENAWEE COUNTY

The regular meeting for the month of February was held at Adrian on Thursday the 16th. The members met at the Lenawee Hotel for dinner at 6:30 p. m. There were 24 present. President Hammel was absent, being in Chicago, so the scientific meeting was in charge of Vice President Howard Heffron. Dr. Russell L. Mustard of the University of Michigan Hospital was introduced as the speaker of the evening. Dr. Mustard gave a very fine talk on the treatment of fractures of the femur and the radius and ulna. He illustrated his talk with lantern slides. He gave very clear explanations of the technic of the different procedures now in use at the University Hospital for the management of these types of acute fractures.

The April meeting will be held in Adrian at the Lenawee Hotel. Dr. James E. Davis, Pathologist at the Detroit College of Medicine and Surgery will be the speaker and will talk on "Inflammation of the Kidney."

The May meeting will be held in Hudson. This will be the first meeting held in Hudson this year and will be at the new Hospital. Dr. E. G. Mar-

tin of Detroit, will be the speaker at the scientific meeting.

R. G. B. Marsh, Secretary.

NEWAYGO COUNTY

The annual meeting of the Newaygo County Medical Society was called at the Kimbark Inn, at Fremont, Michigan.

After luncheon the meeting was called to order by the President, Dr. Drummond. The minutes of the last regular meeting were read and approved.

Dr. B. F. Black of Holton was then unanimously voted to membership in the Society. A communication from Dr. LeFevre, district councilor, relative to time and place for holding the next P. G. Medical Conference was read, and a motion was made by Dr. Geerling, supported by Dr. N. DeHaas that the Secretary be instructed to notify Dr. LeFevre that the Society would be pleased to have the next P. G. Conference at Fremont about the first week in June of 1928, and the motion was carried.

The Society then proceeded to the election of officers for the ensuing year with the following results:-

President—Dr. H. R. Moore, Newaygo, Mich.

Vice-President—Dr. J. C. Branch, White Cloud, Mich.

Secretary-Treasurer—W. H. Barnum, Fremont, Mich.

Committee on Medical Defense—Dr. N. DeHaas, Fremont.

Delegate to Michigan State Medical Society—Dr. P. Drummond, Grant, Mich.

Alternate—Dr. B. F. Black, Holton, Mich.

Members present, nine.

W. H. Barnum, M. D., Secretary.

OAKLAND COUNTY

Dr. Don M. Griswold, deputy commissioner of the Michigan Department of Health, addressed the Oakland County Medical society at its regular monthly meeting at Royal Oak Methodist Episcopal church. His topic was "County Health Units."

Dr. Griswold traced the gradual evolution in the practice of medicine in the last 30 years and pointed out the growing importance of preventive work.

He outlined various activities of the State Health Department and compared the system in Pennsylvania—with a centralization of authority—with Michigan where the policy is decentralization by developing strong city and rural health departments.

Rural health work can best be carried on by taking the county as a unit for organization purposes and developing well balanced public health programs for the rural districts, he said.

While county health work in Michigan is new, it has been established in other states for a considerable period of time. The first county unit was established at Yakima Valley, Wash., in 1908, following an epidemic of typhoid fever.

Health demonstrations, Dr. Griswold contends, should be carried on with the co-operation of the local medical profession rather than by outside agencies. In his address he mentioned the work

of the full-time county health organizations in the Mississippi flood area in 1927. Owing to the organized service rendered in the stricken area many epidemics which were feared did not materialize.

In conclusion the speaker stated that only the backing and co-operation of the county medical societies will insure the success of a county health unit.

Two physicians were elected to membership in the county society. They are Dr. Ethan B. Cudney, Pontiac, and Dr. H. E. Boice, Farmington. —Pontiac Press.

HOUGHTON COUNTY

Regular monthly meeting of Houghton County Medical Society was held Tuesday evening, March 6, 1928, at 8:30 o'clock at the Douglass House, Houghton, Mich.

Dr. Alfred Labine, vice-president presided in absence of the president.

Fifteen members were present.

Dr. A. D. Aldrich read a very interesting paper on "Angio-neurotic Edema", with personal experiences. Dr. Aldrich having been a victim of this malady, gave us some very interesting information regarding the symptoms and results of his treatments. Latest literature considers the etiology to be classed with other allergic diseases. The discussion emphasized point that probably "fatigue" was an important factor in precipitating an attack. It was also pointed out that the treatment of condition was pregnant with possibilities as to giving a clue to its etiology. The fact that Adrenalin chloride will relieve an attack, leads one to believe that probably a mal-function of this gland would be a factor in causing an attack. It was the consensus of opinion that one factor in the etiology of this condition was probably a bio-chemical condition, dependent upon the mal-function of the endocrine system.

T. P. Wickliffe, Secretary-Treasurer.

KENT COUNTY

The Annual Meeting and dinner of the Kent County Medical Society was held at the Peninsular Club, Grand Rapids, Michigan, December 14, 1927, and the following officers for the ensuing year were elected:

Dr. Harrison S. Collisi, President.

Dr. John Wenger, Vice-President.

Dr. John M. Whalen, Secretary-Treasurer.

The delegates to the Michigan State Medical Society of the year 1927 and the Defense League Representative, Dr. George L. McBride were re-elected.

Since the Annual Meeting there have been held five regular meetings at which a variety of scientific papers have been presented, principally by members of our own local organization, but we also have had the opportunity and pleasure of entertaining Dr. Alfred LaFerte of Detroit, who spoke on "Fractures of the Long Bones", Dr. O. P. Kimball of Cleveland, Ohio, who reported his impressions as to the Universal use of Iodized Salt in the Prophylaxis of Goitre, and Dr. E. I. McKesson of Toledo, Ohio, who discussed from all angles the subject of Anaesthesia.

Great interest has been shown in all these scien-

tific meetings, as evidenced both by the attendance and the discussions following the presentation of these papers, and the ensuing year at its outset promises to be very successful from all standpoints.

J. M. Whalen, Secretary-Treasurer.

GENESEE COUNTY

The meeting of Genesee County Medical Society was held February 8, 1928, at the Hotel Dresden, Flint, Mich., with President McKenna in the chair. Minutes of the last meeting read and approved.

Dr. Blanche Weill announced that Dr. Alfred Adler would be in the city in April. She proposed that two or three groups interested in Psychological problems jointly contribute toward financing a lecture by him on some phase of adult psychology. Dr. Malfroid moved that the Genesee County Medical Society contribute \$25 as their portion of the contribution. Motion seconded and carried.

Letter from Dr. Warnshuis concerning activities of the Gorgas Memorial read by the secretary.

Following explanations and discussions by Dr. Griswold of Act 306 of Public Acts of 1927, Dr. Benson moved that the Act be indorsed by the Genesee County Medical Society.

Meeting adjourned.

M. S. Chambers, Secretary.

Genesee County Medical Society held its regular meeting February 22, 1928, at the Hotel Dresden, Flint, Mich., with President McKenna presiding. Minutes of the last meeting read and approved.

A committee to investigate furnishing the new hospital auditorium was appointed by the president as follows:

Dr. M. S. Knapp, Chairman; Dr. H. E. Randall, Dr. H. Cook, Dr. G. Briggs, Dr. E. G. Dimond.

Dr. George Burr of Detroit gave a paper on "Renal Tuberculosis."

Meeting adjourned.

M. S. Chambers, Secretary.

HILLSDALE COUNTY

The Annual Meeting of the Hillsdale County Medical Society was held at the Lantern Tea Room, Hillsdale, January 19, 1928, President Dr. H. C. Miller in the chair.

After a fine dinner and the reading of the minutes, the president introduced Dr. R. L. McLain of Quincy, who gave a timely and very instructive address on "Medical Legislation," pointing out the need of more medical men in our legislature, of which he has been an honored member, and the difficulties they have to meet in securing needed legislation. Discussed by Dr. Sawyer, after which Dr. McLain was cordially thanked by the President for his fine and needed address.

Dr. Fenton then gave a brief report of the "Race Betterment Conference" at Battle Creek, January 2 to 6, 1928.

Dr. S. B. Frankhouser gave a most interesting account of his recent visit to Chicago out at the aviation field and his meeting with Mayor Thompson of that city.

It was moved, supported and carried "That the

annual dues of this Society hereafter be \$12.00 for State and County, \$2.00 to remain in the local treasury."

Moved, supported and carried "That the present corps of officers of the Society be retained for the ensuing year."

Moved, supported and carried "That Dr. Bion Whelan be made an honorary member of the Society."

Moved, supported and carried "That C. T. Bower be made delegate to the State Society with Dr. G. R. Hanke as Alternate."

Adjourned.

D. W. Fenton, Secretary.

MUSKEGON COUNTY

At the regular monthly meeting of the Muskegon County Medical Society, held in the Community Room of the Union National Bank, the following business was transacted.

The Society voted unanimously to approve of the action taken by the Wayne County Medical Society in passing a resolution disapproving of the proposed legislation known as act 306 P. A. 1927 whose purpose is to establish full time County Health Officers in the various counties.

At a previous meeting it was brought to the attention of the Society that some of the industrial plants in Muskegon were allowing optometrists to examine the eyes of employes during business hours in the factory. A committee was appointed to bring to the attention of the factory heads that the industrial physicians already in the factory organizations are better able to make these examinations if they are thought to be necessary.

Dr. Colignon, chairman of the committee, reported that four factories which had discussed the matter with him had no intention of employing anyone but physicians and surgeons to make examinations.

Dr. Bloom reported that the committee on physical therapy had met with the director of the Y.M.C.A. and a competent masseur had been engaged to perform massage under the direction of members of the medical profession. Membership in the Y.M.C.A. is not necessary in order to make use of the services of the masseur.

Dr. P. S. Wilson was appointed chairman of a committee to represent the Society at the tuberculosis clinic to be held at the Muskegon County Sanitarium under the auspices of the State Tuberculosis Society, March 1.

Dr. F. Garber was appointed chairman of a committee of three to write an advertisement of the Society to appear in the special edition of the Muskegon Chronicle to be issued in celebration of the completion of the new Chronicle building. The Society voted to appropriate \$250 for the advertisement.

The Society voted to appropriate \$25.00 to sponsor a booth at the Boy Scouts Exposition in the Muskegon Armory February 23, 24, 25. The booth is to depict some form of first aid work.

The Society voted unanimously to invite the Oceana County Society to attend the meeting on April 13th, at which Dr. Reuben Peterson, Professor of Obstetrics at Ann Arbor, will be present.

Dr. D'Alcorn read an interesting paper on the comparative costs of medical service and particularly obstetrical service, showing the cost of

maternity under various conditions in various places.

The meeting adjourned at 10:45 p. m.

BERRIEN COUNTY

The Berrien County Society had a very good meeting in Niles on the 23rd of February.

Doctors Greene and Bryant of the Cass County Society were present in response to an invitation from the Berrien County Society to affiliate with them. It was their opinion that Cass County would get together and join with us, so we will probably be known after a while as the Berrien-Cass County Medical Society.

The letter from Dr. Warnshuis in regards to the Gorgas Memorial activities was read, and a motion made and seconded that the Berrien County Society support the State Society in their opposition to this movement. This was unanimously carried.

The resolution from the Wayne County Society and the letter from Dr. Kiefer (concerning the new county health departments) were not acted upon. On motion the subject was held over until further information was obtained.

Announcement was made of the post-graduate conference to be held in this district in May. This meeting will be held either at the new Whitcomb Hotel in St. Joseph if available at that time, or at the new Congregational church in Benton Harbor. Arrangements and program will be announced later.

The society will entertain at dinner on March 12th the following members from the University of Michigan staff: Doctors Cabot, Warthin, Hickey, Collier and Kahn. They will probably present a symposium to Berrien County men.

Papers given at the Niles meeting were by Doctors Wilson and Giordano, of South Bend, Ind. Dr. Wilson attended the International Goitre Clinic at Switzerland last summer, and gave a very interesting paper on "Toxic Goitre." Dr. Giordano discussed "The Pathological Findings in the Thyroid Following Iodine Medication." Discussion of these papers was opened by Dr. Frank King of Benton Harbor, and Dr. Gillette of Niles.

Both papers and the discussion were extremely interesting and of value to all present.

Committee appointments were announced by Dr. Strayer, the president, as follows:

Board of Censors, Doctors Sowers, Westervelt and Giddings: Membership Committee, Doctors Howard, McDermott and Rutz. Executive Committee, Doctors Gillette, Dunnington and Tonkin. Grievance Committee, Doctors Henderson, Rosenberry and Telkie. Program Committee, Doctors Snowden, Witt and F. A. King. Tuberculosis Committee, Dr. C. A. Mitchell.

W. C. Ellet, M. D., Secretary.

MARQUETTE-ALGER COUNTY

The Marquette-Alger County Medical Society held its annual meeting December 30th, 1927, at which time officers were elected for the year 1928. The following officers were elected:

President—Dr. A. W. Hornbogen of Marquette.

Vice-President—Dr. W. A. Corcoran of Ishpeming.

Secretary-Treasurer—Dr. R. L. Finch of Marquette.

Delegate to the M.S.M. meeting—Dr. H. H. Loveland of Republic.

Alternate delegate to M.S.M. meeting—Dr. N. Robbins, of Negaunee.

Dr. F. R. Schemm of Big Bay was unanimously elected to membership. It was unanimously carried that the Marquette-Alger County Medical Society strongly recommend to the delegates of the State Medical Society the re-election of Dr. R. A. Burke of Palmer, as Councilor for the 12th district.

The regular meeting date was definitely fixed as the third Tuesday evening of each month.

The Society was invited to hold its January meeting at the Marquette Branch Prison Hospital.

At the January meeting which was held at the Marquette Branch Prison on the 17th, the new officers were installed. The members present, numbering 23, were recipients of a fine white-fish dinner which was followed by an inspection of the prison conducted by Warden J. P. Corgan. The meeting was then called to order and the following program given: A paper by Dr. L. L. Youngquist on "Basal Metabolism," with a demonstration of the Sanborn Apparatus; a paper by Dr. J. E. Bellas on "Chronic Duodenal Ileus" and a paper by Dr. R. L. Finch on "Myocarditis." Dr. Finch also presented a few interesting clinical cases consisting of a case of Chronic Endocarditis; a case of Lupus; a case of lacerated eye-ball, a case of post-operative hyperthyroidism, which also was discussed by Dr. A. W. Hornbogen. Several pathological specimens were shown consisting of thyroids removed and a heart showing vegetative endocarditis.

Dr. Rowley of Lansing, State Psychiatrist, was a guest and made a few remarks.

Dr. Van Riper, as chairman of the Morgan Heights Tuberculosis Sanitarium board of directors, invited the Society to hold its regular meeting at the Sanitarium February 21st, 1927.

The president, Dr. A. W. Hornbogen, appointed a program committee as follows:—

Dr. Paul VanRiper, Dr. A. W. Hornbogen as ex-officio member.

Meeting then adjourned.

Russell L. Finch, Secretary.

The regular February meeting of the Marquette-Alger County Medical Society was held on the 21st, at the Morgan Heights Tuberculosis Sanitarium. Dr. S. Lojocano, superintendent of the sanitarium conducted the members through the new addition which has recently been opened and which is modern in every way. This was followed by a very delicious chicken dinner.

Dr. F. McD. Harkin of Marquette gave a short address on the origin of the Morgan Heights Sanitarium. This was followed by a talk by Dr. C. N. Bottum, of Marquette who was the first attending physician to the sanitarium. He told of the opening in 1911 at which time the capacity was 16 beds. It was interesting to note that the first patient admitted, an incipient case, was later discharged as cured. However, nearly all cases were of the advanced stage. Dr. Bottum stated that at the time Morgan Heights was established, it was the first tuberculosis hospital in the Upper Peninsula and only a few in the entire state. Dr. Bottum was the attending physician for four

years, or until the first full-time physician was appointed in 1914.

Dr. Paul VanRiper, of Champion, Chairman of the Sanitarium Committee of the County Board of Supervisors, spoke briefly of the evolutionary stages through which the sanitarium passed in coming to its present high standard.

Dr. F. R. Schemm of Big Bay presented a case of "Fracture of the Anatomical Neck of Humerus, With Good Functional Result."

Dr. S. Lojocano, Superintendent of the Sanitarium, presented a case of "Tuberculosis of the Wrist Joint, Complicated by an Advanced Pulmonary Tuberculosis." This case was operated by Dr. A. W. Hornbogen of Marquette who performed Ollier's Sub-periosteal resection of the lower part of radius and ulna, all the carpal bones and a portion of the four metacarpals. This case is convalescing with no exacerbation of the pulmonary lesion. Heliotherapy is being given.

Dr. S. Lojocano also presented many X-ray pictures with history of cases of tuberculosis in all stages and cases where artificial pneumothorax was instituted.

Dr. A. W. Hornbogen presented the history and X-ray in a case of fracture of the coracoid process of the scapula by muscular exertion.

Dr. S. Lojocano read a letter from the Michigan Tuberculosis Association relative to a prospective chest clinic to be held at the Sanitarium for doctors in March. The Society accepted the invitation to hold its March meeting at the Sanitarium at the same time as the clinic.

Dr. Picotte of Ishpeming extended an invitation to the Society to hold its April meeting in Ishpeming, which was accepted.

The Secretary was instructed to send a letter of appreciation to Dr. and Mrs. Lojocano and the staff of Morgan Heights Sanitarium for the splendid dinner and entertainment.

Russell L. Finch, Secretary.

KALAMAZOO COUNTY

The regular meeting of the Kalamazoo Academy of Medicine was held in the Academy rooms January 17th. The usual dinner preceded the evening program.

The business session was called to order at 7:30 by the President, Dr. W. E. Shackelton.

The minutes of the previous meeting as printed in the bulletin were approved.

No report from special committees.

A letter from Dr. Z. L. Baldwin of the Baldwin Sanitarium requesting the Academy to appoint a committee to investigate his institution and in case of a favorable report, the indorsement of the Academy be used with physicians who may be solicited to send their patients for treatment. Moved by Dr. Boys, seconded by Dr. Bennett that this be referred to the Board of Directors with the power to act. Passed.

Dr. Russell Collier whose application was read last month was unanimously voted a member of the Academy.

Dr. Clara Unrath's application for membership was read.

Our councilor, Dr. C. E. Boys, reports that the State meeting will be held in September instead of June, the exact date will appear later in the State Journal.

Dr. Shepard spoke of the plan of the State Tuberculosis Society to hold group clinics and demonstrations here sometime in the near future. The date and places these will be held has not been decided but the official announcement will be made later.

Dr. Hugo Aach spoke of the quackery practiced by our well known "squaw" and cited a case that recently came to his attention. Sentiments were also expressed by Doctors Thompson, Gerstner and Bartholomew. Motion made by Dr. Stewart which was seconded and passed that this be referred to the Medico-Legal committee for obtaining of facts to be forwarded to Dr. Warnshuis for action.

Dr. Bartholomew spoke of the irregular practices of an osteopath in Allegan County. Dr. Shackelton asked him to gather the data and present it to the Medico-legal committee for consideration.

Dr. George Wilson's talk on the treatment of fractures illustrated with moving pictures and radiograms was indeed very instructive. It is needless to say that we all gained many sound ideas regarding the handling of such cases. The talk was discussed by Doctors Boys, Crum, McNair, VanNess, Seybold, Jackson, Andrews and Kudner.

Dr. Griswold outlined the plans of the State Health Department to establish the County Health Unit to carry on the work of the State Health Department. Dr. Kiefer proposes a health organization to include every member of the County Society and the public health work is to be carried on by the members. The unit would be headed by a full time county health officer whose functions would be, administrative, technical and educational.

The unit may or may not include the larger cities that already have full time health officers, this to be decided by the local society. Dr. Griswold states that in the beginning \$10,000.00 is about what is needed to carry on the work, the State Department would furnish one-fourth the amount, another one-fourth from the N. S. Public Health Service or other organizations and the remaining half by the county. This was referred by the president to the Public Health Committee for consideration and presentation later.

DUES FOR 1928

The dues for this year are now payable and must be paid before April 1st to avoid automatic suspension from the Academy. The dues for those living in the city of Kalamazoo is \$17.00, for all other regular members \$15.00 and \$3.00 for associate members.

LADIES NOTICE!

The Woman's Auxiliary will have a pot-luck dinner Tuesday evening, February 21st, 1928 at Mrs. W. E. Shackleton's, 127 W. Lovell St., Kalamazoo. Bring your own table service and one article.

Mrs. R. J. Hubbell, Secretary.

Regular meeting of the Kalamazoo Academy of Medicine was held in the Academy rooms, February 21, 1928. Dinner was served preceding the evening program.

The meeting was called to order at 7:30 by the President, Dr. W. E. Shackleton.

The minutes of the previous meeting appearing in the bulletin were approved.

Dr. S. R. Light read a letter, formulated by a special committee regarding the visual surveys in industry and schools by optometrists. He proposed that this letter be sent to the industrial concerns of Kalamazoo and the immediate vicinity. Following is a copy of the proposed letter:

To Employers in Kalamazoo, Allegan and Van Buren Counties:

The Kalamazoo Academy of Medicine, an organization of the physicians of Kalamazoo, Allegan and Van Buren Counties, is informed that there has been presented to many employers of Kalamazoo, as well as to the School Board, propaganda in one form or another, advocating examination of the eyes of employees and school children by men who are not medically educated.

It is generally proposed that this examination will be made without charge and the examiner will be compensated by the opportunity to sell lenses to those examined.

We consider it important to remind you that the eye is a part of the body and subject to physiological and disease conditions that affect other parts of the body. The examination and treatment of any abnormal condition in the eye should be undertaken only by those who have full knowledge of the structure and functions of the eye, as well as the relation of the eye trouble to disease in other parts of the body.

In view of the propaganda which has been spread in this matter as well as other efforts to institute a variety of health measures, we think it proper that we remind you that in all matters of this kind your medical adviser is by his education and training, qualified to inform you of the best steps to be taken; and we would suggest that when such matters are presented to you in the future, you discuss them with your medical adviser before undertaking a program which might not accomplish the end you desire.

Your comments in reply to this letter will be appreciated, and may be addressed to the Secretary of The Kalamazoo Academy of Medicine or to any one of the committee whose names are appended.

Respectfully submitted,

The Kalamazoo Academy of Medicine

by:

J. B. Jackson,
F. T. Andrews,
S. R. Light,
Committee.

Moved by Dr. Crum that this report be accepted and a copy be sent to the industrial concerns as listed by Dr. Light. Seconded by Dr. Thompson. Dr. Van Ness amended the motion to include also the industrial concerns of the counties included in the Academy. Amended by Dr. Bennett that an R. S. V. P. be incorporated in the letter. Seconded. Motion passed with both amendments.

Dr. Andrews moved that the Academy go on record as not in favor of the full time county health officer at the present time. Seconded by Dr. Crum, Motion carried.

Dr. Crum moved that the president appoint a committee of five from the Academy to consult with the City Health Officer, the City Physician and the heads of City Clinics regarding the policies of the City Health Department. Seconded. Motion passed. The following members were appointed on this committee: Doctors Andrews, Westcott, Shepard, Hubbell and Crum.

Dr. Clara Unrath's application for membership read at the last meeting, was presented for final action. It was moved by Dr. VanUrsk, seconded by Dr. Stewart that the application be accepted. Unanimously passed.

Dr. James L. Pierce gave a very practical talk on a few of the common complications of pregnancy and child birth and recited several histories to illustrate their method of handling these cases.

SAINT CLAIR COUNTY

A regular meeting of Saint Clair Medical Society was held at the Harrington Hotel, Port Huron, Michigan, Thursday, March 1, 1928. Supper was served to eight members and three guests at 6 o'clock and the meeting called to order at 7:30 p. m. by the President with the following members present: Doctors Smith, Caster, Cooper, Burley, Vroman, Callery, Meredith, H. O. Brush, Wellman, Kestl, Clancy, Morris, Windham and McColl. Dr. L. R. Gaddis was present as a guest and there were also present as guests of the Society ten graduate and eleven student nurses.

The minutes of the preceding meeting were read and approved. Applications for membership in the Society were received from Dr. E. W. Caster of Yale, Michigan and Dr. J. C. Webster of Marlette, Mich. The application of the former was acted upon favorably and he was elected to active membership by transfer from the Wayne County Medical Society. The application of the latter was deferred for additional data.

President Smith made a brief report to the Society relative to a certain matter he had taken up with the editors of the local daily newspaper.

Dr. M. E. Vroman then read a splendid paper upon defective vision, including myopia, hyperopia, astigmatism, presbyopia, etc., and explained the mathematical computation necessary in correction of refractive error and also touched upon the physiology, anatomy and pathology of refractive errors. The subject was discussed by Doctors H. O. Brush, Morris, Cooper, Caster, Smith and McColl after which Dr. Vroman closed the discussion in the usual manner.

Dr. W. H. Morris then read a paper upon Diathermy, explaining the mechanics thereof and the clinical uses in treatment of a wide variety of disease. Dr. Morris is inclined toward the viewpoint that Diathermy is a valuable adjunct in the treatment of disease both medical and surgical. In concluding his paper the speaker quoted several reprints from various authorities throughout the United States showing the value of diathermy. The subject was discussed by Doctors Cooper, Caster, Windham, Vroman and Smith, following which Dr. Morris closed in the usual manner.

The Society then went into executive session during which a matter of vital interest to the community and the Port Huron Hospital was discussed, the opening remarks being made by Dr. C. C. Clancy, President of the Port Huron Hospital Association.

The meeting adjourned at 9:30 p. m.

George M. Kestl, Secretary.

A regular meeting of St. Clair County Medical Society was held at the Harrington Hotel, Thursday, March 15, 1928. Supper was served to ten members at 6 p. m. The President, Dr. Reginald Smith, called the meeting to order at 7:05 p. m.

with the following members present: Doctors Smith, Thomas, Morris, Grice, Patterson, Vroman, Waters, Kestl, McColl, Haight, Bovee, Lane, Caster, B. E. Brush, Clancy, Wellman, Bowden, McKenzie, Heavenrich, Callery, O'Sullivan, Attridge and L. R. Gaddis, local health officer, a visitor. The minutes of the preceding meeting were read and approved. The letter of Secretary Warnshuis to all County Secretaries read and discussed. The Secretary requested the members to assist him in answering the questions contained therein. The consensus of opinion indicates the members think the care of tuberculosis patients and management of free clinics the two most pressing questions in Saint Clair County. It was believed the proposed basic science law and the prosecution of chiropractors should be taken up by the State Society and pressed. It appears that no prosecution of chiropractors has even been attempted in this county.

Dr. J. C. Webster of Marlette was then elected to membership in the Society. A letter from Dr. Ralph G. Hubbard relative to a temporary location with a member of the profession requiring either a substitute or an assistant was read and placed on file. A letter from Dr. C. B. Stockwell, an honorary member of the Society, thanking the Society for sending him a plant on his birthday, read and placed on file. A letter from Lifsey Tours, Inc., relative to a tour being arranged in Europe for the coming summer, read and filed.

Dr. J. A. Attridge read a report from the Clinic Committee as follows:

"Your Clinic Committee, after a careful survey of the clinic problem, determined that a clinic centered around the hospital and conducted as set forth in our preliminary report, which was endorsed by this Society, would be a great benefit to our hospital and the people of the community in general and in keeping with the spirit of the times.

"The Committee, therefore, presented their report to the Chairman of the Hospital Board asking for space in which to conduct said clinic. The Board met on the ninth of March, when Dr. George Waters, a member of this Committee and also a member of the Board, presented our views. The Board could not furnish space at the present time and this led to the suggestion that the Board get a campaign inaugurated to carry on a drive to raise funds to get hospital, clinical or out-patient department as needed.

"This Committee believes and therefore wishes to urge this is a favorable time to push this issue. This report is based on sentiment gathered while making the previous survey.

"J. A. Attridge,
C. F. Thomas,
George Waters,
J. H. Burley,
A. J. McKenzie,
Committee."

This report was placed on file and the Society went into executive session to discuss same.

Dr. A. J. McKenzie addressed the Society upon the subject of the "Acute Surgical Abdomen." In beginning Dr. McKenzie said the subject was very broad and could not be covered in detail in a short time, but that he would touch upon predominating features. Generally the speaker confined himself to confusing points in diagnosis between the various surgical conditions often found in the abdomen and stressed the features of

the following conditions: appendicitis, pyelitis, cholecystitis, pathology of the right kidney, pyelitis associated with pregnancy, obstruction of bowels, intussusception, volvulus, embolism and thrombosis of mesenteric vessels, metastatic carcinoma of liver, ectopic pregnancy, pancreatitis, ruptured duodenal ulcer, pneumonia in children which often simulates appendicitis, traumatic injuries to contents of abdomen and salpingitis. Dr. McKenzie also touched upon the necessity for a bimanual examination in women to rule out possible disease of pelvic organs and a careful urinalysis in children to rule out a pyelitis. In relieving obstruction caused by bands, the speaker cautioned his associates to remove the entire band rather than just to resect it, inasmuch as these bands frequently grew together to re-establish the obstruction. Concerning abdominal distension associated with obstruction Dr. McKenzie stated that the lower the point of obstruction the greater the distension and the nearer the pylorus the less the distension. The upper loop must always be drained. Speedy treatment is indicated in intussusception and an important point is bloody stool below point of disease. "Sixty-five per cent of the cases of intussusception," said Dr. McKenzie, "occur at the ileo-caecal valve or junction and in reducing the condition always remember to do something to prevent a recurrence, such as stitching the caecum to the right iliac fossa." Similarly, said the speaker, in volvulus which usually occurs in the sigmoid region always anchor the bowel to the left iliac fossa to prevent a recurrence. In treating embolism or thrombosis of the mesenteric vessels always remove a little more tissue than appears to be affected in order to prevent additional gangrene after the abdomen is closed. In a mass felt in liver always search for a possible primary carcinoma in bowel. In the differential diagnosis between ruptured duodenal ulcer and acute pancreatitis, the essayist stressed the condition of the pulse early in the condition. In ulcer it was often slow while in acute pancreatic disease it showed very evident shock. In touching upon the etiology of pancreatitis, Dr. McKenzie thought that the possibility of an infection from the bile duct should be considered. Also in the treatment of pancreatitis the gall bladder should be drained. In conclusion, the essayist inquired of his associates their view of the question whether appendicitis cases, going along well at the third or fourth day, should be operated or whether it was better to treat expectantly and await an interval before surgical treatment. "I believe", said Dr. McKenzie, "that we should be conservative in such cases, providing the patient is holding his own."

The subject was discussed by Dr. Attridge at some length during which he related several interesting and puzzling personal experiences in the diagnosis and treatment of acute surgical conditions in the abdomen. Dr. B. E. Brush said the subject was very large and stressed the point that if we could make a diagnosis in some of the severe abdominal conditions and knew just where to look for pathology the patients would have greater chances for recovery. He agreed with the essayist with regard to cases of appendicitis doing well at the third or fourth day and said if the condition became worse at this time that drainage should always be done under local anaesthesia which gave the patient a much better chance for recovery.

Dr. E. W. Caster arose to compliment the essayist upon his address and stated that it was well

worth coming sixty miles to hear. Dr. C. F. Thomas agreed that a wait of four or five days is justified in appendicitis provided patient does well but that if the condition be an obstruction the earlier the surgery the better the outlook. Dr. Smith arose to mention plumbism, which he stated, in his own experience, had been mistaken for other conditions in the abdomen.

In conclusion Dr. McKenzie discussed traumatic injuries to abdominal viscera and stated that fine judgment was often required in deciding upon operative treatment or the contrary. He again stressed the withholding of blood and liquid as well as cathartics in acute abdominal pathology and the giving of plenty of liquid by hypodermoclysis or by rectum.

So ended another of the fine meetings recently enjoyed by this society. These scientific programs led by members of Saint Clair County Society have all been profitable to the members in attendance, formality has been laid aside and the various subjects discussed freely and fully for the betterment of all.

The meeting adjourned at 10:10 p. m.

George M. Kesl, Secretary-Treasurer.

MEDICAL AND SURGICAL CLINIC

DETROIT—MAY 14-18

THE JOURNAL
IS
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WE INVITE YOU
TO UTILIZE
IT FOR THE
EXPRESSION OF
YOUR VIEWS
ON
MEDICAL SUBJECTS

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

THE MECHANICS OF THE DIGESTIVE TRACT: (an introduction to Gastroenterology)—Walter C. Alvarez, M. D., Associate Professor of Medicine, University of Minnesota (The Mayo Foundation). One hundred illustrations; second edition. Price \$7.50. Paul B. Hoeber, Inc., New York, 1928.

Those who have read the author's first edition of this work which appeared in 1922 with 192 pages and 22 illustrations will be eager to obtain this revision which with its 447 pages is in reality a new book. The author combines the rare qualities of research worker and practising physician which fact alone should commend the book to those whose chief concern is the practical aspects of medicine and surgery. We would like to add too that the book is written in a fascinating literary style. Once begun one hates to put it down until finished. The personal element is emphasized in the large number of illustrations of workers both living and dead who have done so much to develop the physiology of the alimentary tract.

We can mention only a few of the subjects treated. Chapter four describes in an interesting way the anatomic and physiologic characteristics of smooth muscle of the gastrointestinal tract. In chapters seven, eight and nine the author amplifies the theory of gradients which occupied a goodly portion of his first book on the subject. Chapter thirteen on the movements of the stomach, and chapter seventeen the pylorus and the duodenal cap discuss phases of gastrointestinal physiology in a manner most illuminating. The chapter on Flatulence is the most exhaustive we have read on the subject. This is a basic book on the mechanical factors of digestion, the best since Cannon's notable work shortly after the X-rays and the opaque meal had been suggested for study of the hollow viscera. Mention must also be made of the bibliography of 900 items, a valuable feature to those who desire to investigate the subject further. And the publisher has co-operated to produce a volume that is a credit to the craft.

THE PRINCIPLES OF SANITATION, (a practical handbook for Public Health Workers)—C. H. Kibbey. Thirty-four illustrations, five colored plates. F. A. Davis Company, Philadelphia. Price \$3.50.

This book is written in non-technical language and is so clear that the layman of not much more than average intelligence would have no difficulty with it. It is intended for sanitary inspectors and other public health workers. It is particularly interesting where it deals with the sanitary problems of the small town and the rural municipality.

THE NORMAL DIET, (a simple statement of the fundamental principles of diet for the mutual use of physicians and patients)—W. D. Sansum, M. S., M. D., F. A. C. P. Second edition, 1927. The C. V. Mosby Company, St. Louis. Price \$1.50.

In addition to a large number of normal diet menus the author discusses the principles of diet under such headings as bulk requirements of the body; acid-ash type of acidosis; acetone type of acidosis; caloric, protein, mineral vitamin and water requirements of the body.

THE YOUNG MAN AND MEDICINE—Lewellys F. Barker, M. D., L. L. D., Professor Emeritus of Medicine, Johns Hopkins University. MacMillan Company, New York.

This book is a number in a vocational series, the purpose of which is to guide young men in the choice of a life calling. No more competent person could have been selected than Dr. Barker to write a work from the viewpoint of medicine. He has divided the book into three sections as follows: First, Decision Regarding a Life Career; Second, Service Renderable by the Medical Profession to our Social Organization; and thirdly, Personal rewards and Satisfaction of Medical Workers. Frequently as physicians we are approached in the matter of choice of profession and often when medicine is broached our advice may be summed up in the laconic word "Don't." Dr. Barker's little book will prove much more satisfactory to the young enquiring mind.

TROUBLES WE DON'T TALK ABOUT—J. F. Montague, M. D., F. A. C. S. of the University and Bellevue Medical College. Illustrated. J. B. Lippincott Company, Philadelphia.

This volume is written to educate the general public in the diseases of the rectum and colon—diseases which, through a mistaken modesty, are often concealed from the physician. Among the ailments described are hemorrhoids, abscesses, fistulas, itching afflictions, loss of bowel control, falling of the rectum, rectal deformities, diarrhoea, colitis, proctitis and ulcers; the causes of these are given as well as measures to be taken for their prevention. One chapter on cancer serves as a warning against the neglect of rectal troubles and another shows the effect of intestinal disease in raising of blood pressure. Several chapters are devoted to constipation, its causes and effects and to the virtues and defects of the various remedies commonly taken for it. The author also discusses bacteria in the colon, Bulgarian and acidophilus milk and other bacillus preparations, diet and personal care, unnecessary operations, mistaken ideas regarding rectal diseases and the evil effects of many home remedies. Evidently written by a proctologist. Other "troubles" might have been dealt with to advantage.

ASTHMA, ITS DIAGNOSIS AND TREATMENT—William S. Thomas, M. D., Associate Attending Physician in Immunology St. Luke's Hospital. Twenty-three illustrations in black and white and six in color. Price \$7.50. Paul B. Hoeber, Inc., New York.

Scientific papers dealing with the subject Asthma have been numerous but so far we know of no other book by an American writer devoted to the subject. Dr. Thomas' work has the merits of a well prepared monograph. Every phase of the subject is dealt with in a clear, concise and personal way. There is a bibliography of 325 references.

INTERNATIONAL CLINICS, (a quarterly of illustrated clinical lectures and especially prepared original articles)—Henry W. Cattell, A. M., M. D. Volume IV, thirty-seventh series; 1927. J. B. Lippincott Company, Philadelphia and London.

This well illustrated volume is especially interesting because of the articles in Scandinavian

Medicine. The orthopedic clinic in Stockholm by Prof. Patrick Hoglund, the Seranfiner Hospital and Caroline Institute, Stockholm by A. Troell, work at the "Radiumhemmet" in Stockholm. To those who enjoy medical history Dr. John Comrie's article on "History of Edinburgh Medical School" and "The Middle Ages" by J. R. Oliver will be enjoyed. There are many up-to-date articles on Medicine and Surgery.

TREATMENT OF DISEASE IN INFANTS AND CHILDREN—Hans Kleinschmidt, M. D., Professor of Pediatrics, University of Hamburg. Authorized translation of the fifth German edition with additions by Harry M. Greenwald, M. D., attending pediatrician to the United Israel Zion Hospital; consulting physician to the Hebrew Infant Home of Brooklyn, N. Y. P. Blackiston's Son & Company, 1012 Walnut St., Philadelphia, Pa. Price \$5.00.

The author has collected only such therapeutic measures of Pediatrics as have been found of value. He has recognized the importance of diatetic and physical methods and has relegated to second place drug agents in treatment. This book has gone through five editions in Germany since 1918. Chapters on nutritional disturbance will be found of particular value for reasons that are perfectly obvious to either the pediatrician or general practitioner who has endeavored to solve these problems in his own practice.

ALUMINUM COMPOUNDS IN FOOD, (including a digest of the report of the Referee Board of Scientific Experts on the Influence of Aluminum Compounds on the Nutrition and Health of Man)—Ernest Ellsworth Smith, Ph. D., M. D. Price \$7.50. Paul B. Hoeber, New York, 1928.

THE SURGICAL CLINICS OF NORTH AMERICA, (Issued serially, one number every other month). Volume 8, Number 1. (Lahey Clinic Number—February, 1928). 210 pages with 74 illustrations. Per clinic year (February, 1928 to December, 1928). Paper, \$12.00; cloth, \$15.00 net. W. B. Saunders Company, Philadelphia and London.

THE MEDICAL CLINICS OF NORTH AMERICA, (Issued serially, one number every other month). Volume 11, Number 3. (Tulane Univ. Number, November, 1927). Octavo of 210 pages with 46 illustrations. Per clinic year, July, 1927 to May, 1928. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London, 1927.

THE MEDICAL CLINICS OF NORTH AMERICA, (Issued serially, one number every other month). Volume 11, Number 4. (Brooklyn Number, January, 1928). Octavo of 277 pages with 53 illustrations. Per Clinic year, July, 1927 to May, 1928. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In many cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

FORECASTS ARTIFICIAL RADIUM RAYS

Artificial rays of radium, in quantities that could only be obtained from a ton of this valuable element, worth 56 billion dollars at present prices, will soon be produced in the laboratory, declared Dr. William D. Coolidge, General Electric physicist and inventor of the X-ray tube (Coolidge hot cathode tube) now in general use, in a recent address. He revealed for the first time details of a new form of his cathode ray tube, and which, by a method of cascading, he has already operated at 900,000 volts, three times as many as previously achieved.

Radium gives off three kinds of rays: alpha rays, or rapidly moving atoms of helium; beta rays, or speeding electrons—the "atoms" of electricity; and gamma rays, similar to x-rays. It has not been possible to successfully imitate

radium radiation exactly because sufficient electrical power could not be put into the generating apparatus. Dr. Coolidge's latest invention will make it possible to increase the voltages applicable to X-ray tubes generating gamma rays, and it will also enhance the power of the cathode ray tubes and speed up the electrons which correspond to beta rays. In fact, it may be possible in time to surpass the power of radium and provide a new tool for the scientist who now uses radium medically and industrially with telling effect.

Speaking before the American Institute of Electrical Engineers, which conferred upon him the Edison medal, Dr. Coolidge indicated what the apparatus can do: "This opens a vista of alluring scientific possibilities. It has tantalized us for years to think that we couldn't produce in the laboratory just as high speed electrons as the highest velocity beta rays of radium and just as penetrating radiations as the shortest wave-length gamma rays from radium. According to Sir Ernest Rutherford, we need only a little more than twice the voltage which we have already employed, to produce X-rays as penetrating as the most penetrating gamma rays from radium and three million volts to produce as high speed beta-ray."

The intensity factor would be tremendously in our favor, as with twelve milliamperes of current we would have as many high speed electrons coming from the tube as from a ton of radium. Another factor in our favor would be the control which we would have of the output. This would be quite different from our position with respect to radium, in which case no physical or chemical agency at our command in any way affects either the quality or the quantity of the output.

Dr. Coolidge's original cathode ray is from an evacuated bulb, with two long extensions. Through one end comes the cathode, which consisted of a small electric lamp filament of tungsten. Such a filament, when lighted, gives off electrons, moving very slowly. Through the other projection from the bulb extends a long copper tube, the anode. When the filament is lighted, a copious stream of electrons is emitted. Then a high voltage, say 250,000, is applied to the tube. This powerful current speeds up the electrons so that they travel through the copper tube, and out to the open air through a thin nickel "window." A "cold cathode effect" prevents the use of more than about 250,000 volts in one tube.

The method now used by Dr. Coolidge to speed up the electrons still more is the very ingenious one of placing several tubes in tandem. The electrons, or cathode rays, in the first tube are furnished by the glowing filament. The end of the first tube takes the place of the cathode of the next, and the electrons from the first tube, already rapidly moving, are still further speeded up by the application of 250,000 volts in the second tube. The speeding stream is fed into a third tube, from which the rays emerge with a speed equivalent to that of the total voltage of the three tubes. With three tubes, Dr. Coolidge has obtained the effect of 900,000 volts, and much more can be used without serious difficulty.

When cathode rays strike a solid metal "target" X-rays are given off. Thus a similar arrangement could be used to produce the most powerful source of X-rays ever devised. To accomplish this the last bulb of the series would contain such a target, from which the X-rays would be emitted.—Science Service.

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WHY A MEDICAL HISTORY?*

C. B. BURR, M. D.

FLINT, MICHIGAN

There are three distinct aspects to the study of history, and the appeal of either is largely determined by individual, temperamental, viewpoints and reactions.

The first is featured by Henry Adams who is led to the definite conclusion that research reveals its essentially unmoral character and that habits of thinking, acting, and emotional response have not followed lines correctly regarded those of betterment or evolutionary progress to higher ideals.

The second is that of the so-called optimist who prefers to believe that the age in which he lives is better than any of those gone before. He points to hospitals and sanitation, to eleemosynary institutions and education, to Red Cross activities and concern for one's neighbor, to various

charitable foundations, and the larger opportunities to achieve cultural aims and comfortable living through more equitable distribution of wealth and increase in the wage scale. He glows with satisfaction as these advantages are enumerated and his attitude often indicates that *au fond* he believes the world could hardly escape being better in view of his presence therein.

The third is the middle of the road view that conditions are neither better materially, nor worse essentially, than heretofore throughout recorded history; that even near-consistency has never been displayed in human conduct; that abiding by the golden rule is expedient but in practice a failure because of the almost universal greed for power, place and the possession of great wealth. The contention is voiced, for example, that our much beloved Red Cross than which no organization, Chris-

* Read before the Wayne County Medical Society, Detroit, April 17, 1928.

tian or pagan, lay or clerical, ever conceived, has been as important and useful, could scarcely have been established save with the co-operation of military leaders who found wounded and writhing men inconvenient in their onward march, and that stumbling over them in furtherance of dynastic or personal ambition left gory traces on polished boots. Skeptics will claim that our Christian civilization is such only in name and that there is no follower of the Master who, smitten, turns the other cheek, or who offers voluntarily to the hold-up man "his cloak also."

Whatever the "truth" if there is any such animal in captivity, may be however, this audience, at least, will be of one mind that in the adjustment of individuals to their environment, in habit-formation of decent conduct and cultivating that which is of good report—in temporarily relieving the troubles of life and ironing out the rough spots thereof, the doctor bulks large; and whether or not it be the case that his works "do follow after him" he is, as an almost invariable rule, a blessing to the community in which he lives during the progress of "life's fitful fever."

It is inexpedient to accord unequivocally with Henry Adams or to ingest his outgivings, hook, line, and sinker but the systematic study of history gives one pause and is a good prescription for that "Adult Infantilism" of which Dr. Joseph Collins feelingly complains. Nothing betrays so indubitably the essential futility of much of man's planning, or indicates with the same apparent conclusiveness that so-called "progress" is frequently a name for something non-existent except in the heads of realtors and go-getters.

It is noteworthy that at the recent lecture of Will Durant in Detroit, effort was persistently made to induce him to pass upon the question whether progress had gone hand in hand with evolution but that he dodged replying directly. As a matter of fact, nobody knows in what progress consists—the word like many another in current use is undefinable. If it means anything at all, it should carry the implication of betterment, of additional comfort, of larger opportunity for development on the cultural as well as material side, of greater tolerance, of more definite expression of good will, of wider distribution of that which makes life more desirable, of added longevity with preservation of bodily and mental integrity, all of these of permanent character and accompanied less

and less by disadvantages, perils and inconveniences offsetting alleged values.

Does history indicate that it fulfils these requirements?

People are massed together in "industrial" centers under the notion that "bigger" means "greater". Population larger than that of nearby cities is the desideratum, this wholly without reference to quality; numbers only are considered and a bulging directory is the standard. For these masses of mankind, provision of food, of fuel, of water is necessary and to this end quick transportation and "harnessing the forces of nature." Quick transportation involves danger to life and the lure of speed develops a psychology, selfish, inconsiderate and undesirable. When it comes to harnessing the forces of nature, what a mess is made of it.

Take Southern California for a pitiful and tragic example. This was once an artistic, an agricultural, horticultural and fruit cultural paradise. Ranches here and there were devoted to the latter ends. Water supply was from the mountain streams and ranches were located thereon. For more distant desert localities simple systems of irrigation were adequate. Came then the booster and Los Angeles was spread over the entire surrounding country, everything adjoining absorbed. Orange groves and olive orchards were destroyed to furnish building room for a miscellany of men. Establishment of varied industries and resulting independence was the boasted goal and to this end water supply was the first requisite. Power was necessary for industrial and gone-and-gotten purposes. Electricity was generated to furnish this, to illuminate immense foolish advertising signs, and to accommodate movie enterprises. The High Sierras were invaded, water in the valleys which provided the ranchman opportunity for cattle grazing and agricultural pursuits was diverted to the use of the city population. Enormous dams and reservoirs were built to facilitate its distribution and then what was due to arrive, arrived.

Forests were ruthlessly destroyed to furnish timbers for building. It is no less than ghastly the amount of material consumed in filming foolish pictures, not a stick of which was ever used more than once. Oil derricks containing machinery to pump and furnish fuel for motor cars to run over the highways and exterminate pedestrians sprang up from Riverside to San Diego and when the oil was exhausted or mayhap undiscovered in the earth's ab-

domen,' these remained permanently an obnoxious feature of the landscape. Not content with building in the valleys, beautiful foothills and mountains were razed for palaces of *nouveaux riches* movietors and oilytors and the wonderful scenic values which attracted the artist and lover of the beautiful were sacrificed. Mules and scrapers and "realtors" flags were substituted for the restful vision of alfalfa fields and Pomona's choicest products.

So much for "development." Enter the air-plane. There was universal satisfaction in the final accomplishment of an ambition existing since the beginnings of time, but the essential value has been vastly more in the achieving than in the achievement. It points 'tis said, to man's mastery (illusory word) over the forces of nature. It opens to the adventurous and the favored of Fate having the requisite skill, opportunities for looking upon and mapping unexplored regions of the earth but because of its fascination the bodies of many admirable persons have furnished food for sharks, war is made more ghastly and gory, and numerous brave spirits have gone to their eternal rest while their "mourners go about the streets." Does the unquestionable usefulness of this in times of famine and flood compensate for the perils incident to its employment? This is at least open to doubt.

I notice, for example, that it was the dog-team of Dr. Deadman that recently brought supplies and medicine from Sault Ste. Marie to Detour in advance of the air-plane. And how interesting it is that there's always a doctor mixed up in such an undertaking! Personally, at three score and ten plus, I expect to live just long enough to be dodging slops and perhaps missiles thrown out by the anti-social aviator, with the same alertness now exercised to avoid being spattered at the curb or dismembered at the street corner by the moron yclept "Motorist".

Do these inventions mark progress and does jazz through being "different" offer anything for the improvement of musical taste? Does the blat of the barker who figures so largely in radio provide entertainment properly so-called? Or for that matter, does the average movie production? "Adult infantilism" in my opinion can alone account for response to puerile stirrings of the emotions such as these create. Though averse to "slogans", I'm moved to suggest one to the present gen-

eration. "Speed and speculation. Noise and nonsense."

There is a certain relief from these horrors in digging into history which shows that similar afflictions have prevailed in the past and that the world has gone 'round and 'round, suffering and enduring. And history further indicates that in amelioration (which is all that is ever accomplished) of the evils of life, the doctor has from the beginnings of time done more than his part.

The accomplishments of the pioneer would have been but for the doctor, impossible. Courage and confidence have been his watchwords. Fearlessness he had—not happily the sort that denies the existence of ground for this emotion but bravery to combat fearsome things and to keep his fellow mortals out of danger. In all the activities of life that make for well-being if not for progress, he has been in the vanguard and the world is deeply his debtor. In times of pestilence and flood and famine, he has sacrificed health and energy to their relief. In war, his and the allied arts of nursing and dentistry have been the only ones exclusively devoted to the conservation of human life.

The research into history for the purpose of assembling scattered parts into a coherent whole is full of thrills. Nothing is more intriguing than to find a fact over here to link up with a fact over there, particularly if the fact over here is come upon unexpectedly or accidentally. Then, how provokingly interesting to look for the record of the fact encountered over there and be unable to find it for the moment because inexperienced in the art of indexing. And when found, what satisfaction in uniting them in the bond of prose composition. Verily, that is compensation for the expenditure of time and the incidence of trouble. Try it. Embrace the opportunity given here and now to help out with the embryological medical history which my confreres and myself are gestating.

Why a history of anything if in its essential particulars it will be but a replica of something gone before? it may be asked. There would in fact be *no justification* for it except preserving the record of the lives of individuals who made it. So long ago as 1881, the venerable and accomplished Dr. O. C. Comstock, Jr., wrote to the State Medical Society:

"A thoroughly educated and virtuous doctor is the highest type of man. He stands between 'the living and the dead'. His wasting mental and physical labor

goes without appreciation and often without reward. Nevertheless, he has an undoubted right to live in history, for his own sake, and the sake of the good cause with which his life has been crowned."

The eminent and eloquent Dr. Foster Pratt who apparently feared that an undertaking of the kind might result in a compilation of "obituary notices and biographies" remarked that "certain practical questions arise here that require more deliberation than we can give them at present," and inquired "after we get all the obituaries what are we going to do with them? This I repeat, is a serious question and should receive mature consideration."

The fear Dr. Pratt expressed and that of others similarly minded, the planners of the Medical History hope to allay by the announcement that such a work should concern itself only in a casual manner with the purely statistical and that the necrological is already well preserved in resolutions of medical and civic organizations published in connection with the Pioneer and Historical Collections, the Transactions of Societies and Medical Journals, all accessible to those having the courage to investigate. "Birth" and "education" and "location" and "death" are episodes merely. A history of medicine should so far as possible embalm the acts and activities, the lives, the ambitions, the failures and successes of those who made it, but, regrettably, can at best record but an infinitesimally small fraction in the sum total of good which the members of the profession have contributed to the health, the wealth, and well-being of any community. Prayerfully we may hope that their benefactions will "live after them" and not be "interred with their bones." Of evil few, very few blots appear upon the pages which reveal their sacrifices, their devotion and their integrity.

How far short the committee may fall in accomplishing the end in view remains to be seen but it has taken as its ideal the modest declaration of Dr. M. L. Leach who published in Michigan Pioneer and Historical Collections an interesting history of Grand Traverse County. He says:

"That the work is imperfect cannot be denied; that it contains inaccuracies of minor importance is highly probable. Should it ever attain the honor of being published in book form, the author will be glad to avail himself of all possible aids in correcting in that edition the faults in this. To this end friendly criticism and com-

munication of further interesting facts are cordially invited."

"There is a particularly striking appeal," writes Dr. M. G. Seelig in "Medicine—An Historical Outline"—"in the solace that medical history holds in her lap for the medical man. No consuming ambition unattained, no scientific yearning, no tragic failure, no brilliant achievement may fall to his lot unaccompanied by the steadying thought that to greater or less degree, sometime in the past, some other physician has experienced similar emotions. When the wreath is withered and the cross too heavy there is a grain of comfort in knowing, for example, that even Aesculapius, the Greek god of medicine, after he had restored Hippolytus to life, instead of a reward, incurred destruction by fire at the hands of Zeus because his professional skill excited the wrath of the jealous deity."

What are the activities—certain of them extra-professional mentioned as desirable to preserve on the printed page? They pertain to every field of human endeavor—educational, civic, political, judicial, dramatic, artistic, literary, industrial, military. Dr. Pratt, to whom reference is above made, was a convincing and eloquent speaker. His presidential address in 1878 to the Michigan State Medical Society which it is hoped to republish in full in the history is a veritable medical classic. With Doctors Jerome of Saginaw, Ranney of Lansing, Topping of Dewitt, Bartholomew of Lansing, James A. Brown of Detroit, he led the anti-administration forces in the University-homeopathic imbroglio of the Victorian Era. Doctors Maclean and Frothingham on the other side were mail-clad warriors who never acknowledged defeat, and who, for that matter, in this, the greatest trial of their professional lives, were not defeated. Dr. Wm. Brodie, who some of you older ones remember, took up arms with the Ann Arbor men in this battle of the giants. Why he forsook the companionship of the Detroit contingent, whose warfare upon the University Medical Department was carried on without quarter, I never knew, but suspect it was because apparently an under-dog was getting the worst of it. He once told me that he didn't give a damn whether he fought with the majority or the minority so long as he had a fight. Those were piping days of discord and the recollection of acquaintance with all the principal participants therein is no little compensation to a septuagenarian who discovers nothing in

present-day medical politics comparable with it in juiciness and vigor.

The old time physician was frequently a judicial officer in his neighborhood and it is related of Dr. Witherell of Detroit, appointed with Governor Hull and Judge Woodward as territorial judge, that he had among other noticeable anatomical features a "resolute mouth", that he was "a public spirited citizen, an honest man and a good jurist". He had a "firm, decided mind", was not a profound lawyer but he had "clear common sense and an inflexible will". His "stern outspoken protest, 'I do not see the force of that decision, there appears no sense in it'" was frequently heard from the bench. I can envision him sneering at legal quibblings.

There were numerous others, among them Dr. Wm. Thompson, the one, no doubt, mentioned disparagingly in the Porter letters published by Dr. Corbus. Of him, Judge Baldwin, whom I knew well, has written, "After his appointment as chief justice, he practiced his profession while performing his official duties. * * * After his retirement from the judgeship he continued his medical practice for some time and then retired to a farm near Pontiac where he died honored and respected."

Reconciliation of these views is impossible, unless there were two of the same name—"too much Thompson" for one pioneer locality.

There was Dr. Sprague of Coldwater, sometime county associate judge, and Judge of Probate, and Dr. William Gage, who built the first house in Holly and was in 1838 a justice of the peace; and Dr. Timothy Eastman, after whom Eastmanville is named, elected judge in Ottawa County, and Dr. Joseph Bagg of Detroit, who, in a quasi-legal capacity as Councilman, caused the erring Peggy Welch to be turned, bag and baggage, (in the double sense) into the street.

The profession has had its dramatic artists like Dr. Rush Shank of Lansing, who, in the staging of the post-civil war "Union Spy" was assigned the part of "Captain Albert". With his cohorts at a critical moment he battered his way into Andersonville and there discovered his drummer-boy brother, Willie, among the emaciated and dying in the "loathsome prison pen". The gaunt and spectral wrecks cry "bread, bread", comrades enjoin Captain Albert "Cheer up, Albert, little Willie is dead"; the Captain exclaims, "Oh my God, this is horrible". And it came out in the gush thus: "Cheer up Al-

bert. Little Willie is dead. Oh my God this is horrible bread, bread". There wasn't a dry eye in the house and in the intermission Mat Daniels' saloon was convenient for the relief of other forms of aridity.

The Anti-slavery propaganda in Michigan was sponsored by doctors, among them Thomas of Kalamazoo County; Comstock and Atlee and Thayer of Calhoun, and "Charley Cowles, a young man studying medicine with Doctors Cox and Campbell". Dr. Arthur Livermore Porter and Dr. Ebenezer Hurd and his partner, Dr. Cowles of Detroit, were dependable propagandists, and Dr. Kedzie, then of Vermontville, writes, "Fears and sleep and earthly cares had little hold on us till wife and I in tears and choking sobs read that wonderful book ('Uncle Tom's Cabin'). Dr. H. C. Fairbank of Genesee County who, on a trip to the South in 1856, had observed the inadequate punishment meted out to the murderer of a falsely accused 'runaway slave' remarked that 'no comments are necessary.'"

In educational matters, physicians have always been at the very head and front. Of Dr. Tucker it is recorded that "Coldwater owes more to Dr. Tucker for the present proud position her schools occupy than to any other man."

Dr. Zina Pitcher, whose relation to the University as member of the first Board of Regents is well known, was distinguished as physician, soldier, natural scientist and journalist. Dr. D. O. Farrand was prominently identified with the public school system of Detroit as was Dr. Herman Kiefer who was later member of the Board of Regents of the University. Dr. Chas. Rynd of Adrian was a member of that body as were Doctors Patterson and Upjohn.

It would be quite supererogatory to dilate upon the labors of Dr. Douglass Houghton, who could fill a tooth with dexterity and was facile in chemistry—a teacher of the latter branch of science at the age of nineteen—pioneer Michigan physician who gave valiant service in the cholera epidemics of '32 and '34, and brilliant geologist. In the latter capacity he mapped and accurately described the mining region of Michigan and laid the foundation for its later development. He was drowned in Lake Superior while engaged in geological survey. Though still young at the time of this tragic accident, he had achieved results—the abundant allotment of a long life.

The Michigan profession has had rhymesters in its ranks, one of the most prolific of whom was the late Dr. E. B. Ward of Laingsburg.

The household of the beloved and devoted Dr. David Inglis were all musical. He manipulated the cello in the home quartette.

It may be a source of surprise to those of the present generation where modesty and self-effacement are distinguishing characteristics of the physician and more particularly the surgeon, to learn that these attributes were by no means invariably present and conspicuously outstanding in an earlier day.

Of one it is said that he was "a man of positive conviction, a relative of the late Secretary Stanton, and partook largely of Mr. Stanton's will to never yield a position after he was satisfied he was right"; of another that he "was a man of strong will power but always willing to listen to the teachings of others and if their views harmonized with his own, he adopted them; if they didn't, he acted on his own conviction of right." It must be admitted that this is a thoroughly logical position for one of pronounced perspicacity, prescience and unwavering self-confidence. Confidentially, I am of opinion that such an attitude is preferred by the patient to any exhibition of hesitation or dubiety.

Dr. Wm. Brodie, while not an orator in the accepted sense of the word, was a sincere and somewhat caustic speaker. He differentiated correctly between horticultural implements and gave to each its homely name. His antipathies were strong and his affections dependable. Those whom he liked could go as far as they pleased in his hospitable house. I recall once upon a time Dr. Frank Brown ordering him out of the dining room when a prenuptial party given in Brown's honor, was moving forward with considerable speed. Dr. Brodie had ventured into the reserved precincts for the purpose of obtaining scrivener's inspiration from a corner cupboard. "You are not wanted here," Brown declared. "This party is for young people and you are *persona non grata*. Go back to your presidential address and leave us in peace." Dr. Brodie chuckled, took a nip, and departed.

The winning, impulsive, affectionate and much-lamented Tracy Southworth was one of his favorites and studied in Dr. Brodie's office.

Dr. James A. Brown was adroit and clever but dabbled in medical politics

purely as a recreation, not with the end of personal preferment. His was a charming personality and he welcomed friends of his son, Frank. They could do no wrong in his estimation. Torn with pain and infirm from extensive caries of the vertebrae, in the latter months of his life, he never lost consideration for others or yielded to irritability. From his wheelchair he called out as Frank and I were leaving the room, "Where are you going, boys?" Nowhere in particular," was the reply. Whereupon, "I hear they have a brand new bar at the Russell House."

On the occasion of my last visit, he said as he took my hand, "I shall never see you again, boy." His sweet soul took flight a day or two later.

He and Dr. Jas. F. Noyes were for years great pals. Noyes was a quaint character and there was a peculiarity in his speech that contributed to its effectiveness. At one time, Dr. Munson, who had an office in the same building—a waiting room in common—heard a colloquy something like this between Noyes and three women who had called for consultation:

To the first. "What's your name?" "Mrs. Brown."

"How many children have you?" "None."

"What's your husband's business?" "He's a carpenter."

To No. 2. "What's your name?" "Mrs. Jones."

"How many children have you?" "Two."

"What's your husband's business?" "Painter."

To No. 3: "What's your name?" "Smith."

"How long have you been married?" "Fourteen years."

"How many children have you?" With a smirk, "Seven, Doctor."

"What's your husband's business?" "He isn't doing anything at present."

"Huh—I thought so."

Then there were the versatile Dr. Connor, veteran journalist, organizer, accomplished ophthalmologist; and Carstens, the snappy and useful gynecologist who in moments of recreation in an exacting and busy life, was accustomed to quote Bismarck's assurance as to the innocuousness of "Wein auf Bier"; the alert and energetic E. L. Shurly; the pioneer in Gynecology, E. W. Jenks; the polished and courteous Flintermann, and D. O. Farrand, whose practice was appallingly large, and under whose patronage and instruction a generation of doctors came forth, all of

whom, with no exception that I can recall, were a credit to the profession. His death was the occasion of city-wide mourning.

Dr. George E. Frothingham had a national reputation as ophthalmologist. He built up an enormous clinic at the University and was highly popular with the student body. He was a persuasive speaker, like the physiologist, John C. Dalton.

And what an impressive lecturer was Ford! One cannot forget his "probe through it" (a foramen).

Tñen there were Douglas and Prescott, of whom their distinguished disciple, Victor C. Vaughan, writes so feelingly in "Memories" which, by the way, is one of the most delightful bits of literature with which I am acquainted.

To the Senior Dr. T. A. McGraw, I am indebted for the arm with which the fingers now wielding a pencil is connected. He was a wonderful surgeon and teacher and among the most scholarly men I've ever known.

Dr. Donald Maclean was fascinating, accomplished, thoroughly human, and his presence was a ray of sunshine in any sick-room. In recognition of his ministrations to one of my family I once sent him a modest check. It was promptly cancelled and returned with a note reading thus:

"Dear Doctor: When you're as well-to-do as I hope you sometime may be, if then I'm as poor as I expect to be, I will accept this check, but not before."

Dr. E. P. Christian of Wyandotte was a noted obstetrician and highly influential in the State Medical Society. He was learned, thoughtful, prompt and painstaking, and never spared himself in working out the problems presented to him in frequent committee assignments.

And of my own generation. Shades of the past, how their forms haunt me as I write. Longyear, my friend from boyhood, whose office I used and whose home was mine. With him I've tramped through the woods and fished, and played dominoes and bridge. In medical and surgical emergencies he has been a tower of strength to me and mine. With the meticulous but adaptable Manton, I've journeyed thousands of miles by rail, boat, on foot, horseback, in every conceivable conveyance except the airplane. His door was always ajar for me and I'm in his debt more than it is possible to express for medical and surgical ministrations to my family.

There was Ben Brodie, a veritable joy to the world, than whom I dare say no one

of his generation had a wider or heartier or more appreciative acquaintance; also the winning, witty, wise Wadsworth Warren, who, on making up a bed for Longyear and me on Jennings' launch, assured us we would find ourselves perfectly comfortable, the deck being coated with *elastic* varnish. Like Longyear and Manton and all good surgeons I have known, he could use his hands effectively. He was an accomplished yachtsman and could repair anything from a motor mechanism to a grand piano. He could *stage* anything from a problem play to an outdoor fete, and was full of dramatic feeling.

Frank Brown expressed himself in rhyme from time to time. His style varied between the Omar Khayamesque and the banal. Came to me one day from the top row in the amphitheatre of old P. & S., 23rd street and 4th avenue, a communication reading as follows:

"Oh, could I live down on the dock
Where Lewitt and Burr reside,
Where cabbage stink is the principal stock
And where bummers and thieves lie side by side—

Where the bold cop on his beat ne'er snores,
Watching for vagrants and brazen ———
Oh! Could I live—but I'll humiliate them no further!"

Brown lived on West 36th street—a fashionable locality at that time, and affected to look down on the modest quarters of Lewitt and myself on 9th street, which he denominated "the dock".

The high esteem in which F. W. Mann, Shakespearian scholar, competent critic of the drama and opera, journalist, chess expert, versifier and mystic philosopher, was held, the devotion of a close circle of friends attests.

Dr. C. W. Hitchcock, before entering upon the study of medicine, a school superintendent of recognized ability, was the son of a distinguished surgeon, Dr. H. O. Hitchcock of Kalamazoo. He served on the staff of that incomparable psychiatrist and executive, Dr. Henry M. Hurd of Pontiac, later superintendent of John Hopkins Hospital. Eventually, he located in Detroit, where he taught neurology in the Detroit College of Medicine.

The erudite Emerson was for years an assistant with Hurd and Dr. Geo. C. Palmer, under Dr. Van Deusen of the Kalamazoo State Hospital. He later specialized in psychiatry in Detroit. Dr. Palmer, who succeeded Dr. Van Deusen, and who was the first Medical Director of Oak Grove, had a charming personality; and his mellow voiced successor, Dr. Wm.

M. Edwards, was one of the few amiable souls who could call me in the morning without exciting irritability.

Dr. W. J. Herdman, the founder of the State Psychopathic Hospital, Ann Arbor, was a forceful speaker and convincing teacher, first of anatomy, then of neurology. His last hours were no less than heroic. Knowing he had carcinoma of the bowels, he made his way to Johns Hopkins, accompanied by Dr. Bradley of Eaton Rapids, his only confidant. No member of his family knew of the malignant condition. He died following an operation on which he insisted.

I could run on indefinitely, but must close. Names such as these, and qualities and characteristics such as these in one's confreres and professional forebears make life worth its price. Perpetuating them is the principal *raison d'être* for a medical history.

MUSIC IN MEDICINE

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That music has played a part in medicine is quite well known and there is no doubt that it will be of still greater value as its application becomes better known.

At present we are living in a period of exact science when everything brought out as new must be checked by measuring, weighing and analyzing before it can finally hope to gain recognition. When we consider how, at the best, we possess only a relative knowledge of anything, no matter how simple, the truth of the value of music does not cease to exist on account of our limited perception of it. It is well known that the aesthetic emotions exercise a most powerful influence over the human organism, be it color, form or tone. Since music is the aesthetic entity with which we are particularly concerned at this time, it may be well to present a few concrete examples to illustrate the principle involved.

Looking back to the dawn of history we recall the biblical account of King Saul and his tempers which at the time were attributed to evil spirits. Through servants he learned of a cunning harp player, who, if brought to him would be able to dispel these spirits by his music. Accordingly, as the story goes, young David was

sent for, and when the evil spirits came upon King Saul, David took his harp and played and "Saul was refreshed and well and the evil spirits departed from him."

The Greeks are known to have had "confidence in music as having a therapeutic virtue." Democritus said, "that in many diseases the sounds of the flute have been a sovereign remedy." Aulus Agellus of the same period stated: "It is a belief widely scattered that a man afflicted with an attack of sciatica feels the intensity of his illness sensibly diminished if anyone playing close to him elicits soft and melodious sounds from a flute." Anyone who has had that most painful affliction can appreciate this.

During the middle ages epidemics of dancing mania, which assumed great and dangerous proportions occurred in many European countries. In Germany this disease became known as St. Vitus dance; in Italy as Tarantate. The afflicted people gathered at public places and on the streets, where they carried on their twitching and grotesque dancing movements with increasing intensity until they finally dropped in a heap from complete exhaustion. The disease proved disastrous to a great number of people. Through some source, the governments of the countries afflicted learned that music was a specific remedy in these epidemics and actually hired musicians to play before the populace in order to dispel the attacks.

MUSIC IN ST. VITUS DANCE

According to the historian, Hecker, the effect of music as a healing agent in this disease was complete and uniform. He also made the remarkable observation that false notes could not be endured by those afflicted.

To this period, then, dates the style of music known as tarentella. This had several tempos; the Panna Rosso, lively, impassioned music, the Panna Verde, a less exciting form; and the Spallata, which was the slowest movement, the playing of this form of music supposedly controlled the outbreaks of the disease (tarantate) in Italy.

Apollo was the father of both Aesculapius and the Muses. On this ground it may be claimed that medicine and music are sister arts. But it is no mere poetic fancy that music is related to medicine, for in modern times a great deal has been written on the therapeutic effects of music in the world's leading medical journals. Actual research has been conducted both clin-

* This paper, essentially in its present form was read before The Bohemians, a Detroit Society of Professional Musicians, at their January meeting, 1928. It is submitted to the medical profession for whatever value it may possess.

ically and in laboratories in order to establish its therapeutic value.

As early as 1878 at the Randall's Island Asylum, New York City, an important experiment was conducted on the mentally ill. Fourteen hundred female patients were congregated in the large entertainment hall of the institution and subjected to a strain of piano music for a half hour, when the general effects were noted. Taken as a whole, the results of the experiments were beneficial and by frequent repetitions many of the patients showed great improvement. They were all *susceptible to rhythm, while melody without any decided tempo was without effect excepting when the force of association was still active.*

In 1892 Dr. Hunter, at the Helensburg Hospital in England, placed a piano in one of the wards. Several ladies volunteered their talents and a number of patients were submitted to the influence of vocal and instrumental music of a character calculated to relieve their sufferings. The report by Dr. Hunter states: "*The cessation or at least diminution of pain has been very marked in some cases, seven out of ten noted cases were benefited by reduction of temperatures.*"

INFLUENCE ON INSOMNIA

A Russian physician, Dr. Beschinsky, during the year 1896, reported the successful treatment of a three-year-old boy who suffered from insomnia due to night terrors. The musical therapy was undertaken after all other known methods had been tried in vain. The child's mother was advised to play one of Chopin's waltzes. The effect was immediate and satisfactory. After four nights of this treatment it was interrupted, and the child's condition became more aggravated than it had been previously. The waltz was again played, first nightly, then every second, and later every third night; the cure was then complete and permanent.

Fournier-Pescay, French physician, treated his own son, who suffered from constant pain and insomnia, by means of the flute, with satisfactory results.

These are only a few of the many clinical reports available.

Dogiel made a series of experiments on men and animals in order to test the influence which music exercises over them in their normal state. He arrived at the following conclusions:

1. Music exhibits an influence on the circulation of the blood both in men and in animals.

2. The blood pressure sometimes rises and sometimes falls.

3. The action of musical tones usually causes increased frequency of the heart contractions.

4. The respiratory rate usually coincides with the circulatory changes, though they have been observed to change independently as well.

5. The variations in the blood pressure are dependent on the pitch and loudness of the sound and on the tone color.

These results are practically all borne out by experiments conducted at the University of Kansas and published in the American Journal of Physiology. We feel that this may represent opinions, but at the same time consider it as valuable reports.

Immediately following the world war, when our hospitals and those of our allies were filled with mentally and physically wrecked young men, it became generally known that games and sports were good convalescent treatment. However, music had the outstanding beneficial effect for soothing and cheering the wounded and shell shocked.

The universal love of music affords endless possibilities in the way of objective recreational work. It is best, however, not to allow disabled men to indulge in it merely as a recreation, but to divert their interest toward an objective, for too much recreation, which is simply of the time killing variety, is a dangerous thing even for convalescing heroes.

MUSIC IN RECREATIONAL PROGRAMS

Music, therefore, has come to be recognized as a distinct factor in any well organized recreational program. It frequently is the spark which kindles those higher impulses in men, which sympathetically fostered, develop into big, noble qualities.

No matter what the degree of a man's incapacity, he can enjoy music and derive benefit from it. In cases of nervous disorders brought about through horrors witnessed or from shell shock, it is frequently *the one medium* through which he can be reached.

Those of us who saw actual warfare will never forget the scenes in the little Red Cross huts by the railway stations and about the big hospital centers and camps in France. Who could doubt the effects of music when, for instance, some talented doughboy would sit down and play on the old rattling piano, "There Are Smiles That

Make Me Happy," or "There's a Long, Long Trail," or "Tipperary", and witness the tired, homesick boys become seemingly electrified, instantly join in the choruses, singing with a vim that was admirable, giving everybody present a new lease on life.

The world war furnished a lot of opportunities for observations even more valuable than those just related. For instance, *the extraordinary influence of the mind on the body in cases of contemplative fear, resulting in so-called conversion hysteria manifested by various paralysis, mutism, blindness or deafness.* It was found in cases of severe shell shock followed by complete amnesia that music was the first means of bringing back recollections to these victims while still unable to remember experiences connected with their daily avocations and home surroundings. Others who had become mute from the same causes regained their speech at concerts by joining in the chorus of some well known song. People who stammer or stutter are able to sing a song without their diction showing such defect.

Of all the arts, music appeals most to the emotions. From an evolutionary standpoint, inarticulate sounds of varying pitch are much older than articulate speech. This is proven by the fact that sounds are initiated in both halves of the brain, while articulate language in right-handed persons can only be initiated in the left half of the brain which controls the voluntary movements of the right half of the body. To illustrate this point there is a record of a soldier who suffered a bullet wound in the head, damaging motor speech centre, destroying right eye and left optic nerve, causing total blindness. The man was very cheerful, comprehending all that was said to him, but only able to say "oot" for no and "ah" for yes. Curiously enough, he was able to sing several songs without difficulty, provided the *first word or bar of music was given.* Thus, his physician would stand beside him humming "Tis a Long Long Way" when the patient immediately started the well known chorus to "Tipperary", winding up with "Are We Down Hearted? No." When the physician finally told him: "Say 'Tipperary', Tom, he replied "oot", and was unable to utter any of the words. It must be concluded that the song *had been repeated so many times as to have become organized in both halves of the brain or in subcortical lower centres.* A month later this man was able to walk and speak.

It was stated that music, of all the arts, appeals most to the emotions. It arouses in us various emotions but, according to Darwin, not the terrible ones of horror, terror or rage. We can see the importance of song in the treatment of battle-worn soldiers. These songs awaken the opposite emotions, such as love, mirth, courage and a "*joie de vivre.*"

RYTHMIC MOVEMENTS

Again, music tends to excite the rhythmic movements of dancing or marching according to the character of the rhythm. It is an established fact that a band helps greatly in the attack or retreat of a regiment, and songs of soldiers on the march tend to relieve the mind of anxiety and bannish the sense of fatigue.

How, then, can the phenomena of cause and effect be satisfactorily explained as regards to music? Our actual knowledge of the physiologic effect of music is on the whole very vague, nevertheless, several attempts have been made by American and European physicians who have devoted much time and labor to the subject. Let me quote from a few of these: "*Pain is a special condition of the sensorium felt as distress and is due to a special stimulation of central or peripheral origin.*"

"Music is likewise a special stimulation which, travelling from the periphery by other routes reaches the sensorium and there gives rise to a sensation felt as pleasure. In the sensorium these two sensations have to struggle for existence as they cannot exist simultaneously, and whichever of the two adapts itself more comfortably to the then governing conditions of that central organ will gain the day. When the victorious sensation is that of pleasure, pain will cease to exist. However, as the conditions of the sensorium are not exactly identical in any two cases, music will sometimes be powerless to dislodge pain from its stronghold.

In cases of insomnia this condition may be kept up by a continued stimulation of the sensorium, but music producing a counter stimulation of the same organ, neutralizes the former and thus allows sleep to reassert itself.

It appears, then, that the *human organism participates in that tendency to vibrate synchronously with music which is known to obtain in the inanimate world.*

There are cases of psychological exaltation which correspond to the high notes of the musical scale as there are states of depression whose pitch is found in the lower

notes of the same. Further, we know that sounds, more or less melodious, are produced during the season of courtship by many insects as spiders, fishes, amphibians and birds.

CANNOT BE EXPLAINED

Darwin, who never rested until he could explain a thing, if it were explainable, could no more explain why musical tones in a certain order and rhythm afford pleasure than we can account for the pleasantness of certain odors, colors and tastes.

The healthful influence of music physically is by the transmission of its influence from the *cerebrum through the sympathetic system which directs the various organs*. Thus, not only is music physic for the soul, dissipating mental depression, soothing psychic perturbations, but its influence may also enhance nutrition, further digestion and restore organic equilibrium. Indeed, the entire working of the human organism, physical and mental alike, may be lubricated by a stream of music, which art and science therefore should have a place in the medical armamentarium. It would, no doubt, be too much to expect every physician to be a performer on some instrument; yet illustrious physicians have been skilled executants. Strumpe, for example, was an excellent pianist; Billroth was a superb violinist, and all the better surgeon for his skill on that instrument. Richard Morrison, famous Boston surgeon of recent years, was a fine cellist; Richard Cabot, Professor in Medicine at Harvard Medical School, is an excellent violinist and chamber music performer. In any event, every physician could well be at least an appreciator of music and have some understanding of that art.

The famous German surgeon and musical philosopher, Theodore Billroth, to whom I have just referred, during the latter part of his life, felt an ardent desire to arrange, classify and outline his own views concerning music. The result of his labor in this direction has been published posthumously in the book entitled, "Who is Musical." Dr. Billroth goes into the very fundamentals of cause and effect in music from a physiologic and psychic standpoint. His conclusions are most interesting and I wish to quote only a few of them. He states: "*Rhythmic movements are among the most important properties of our body and are necessary to life. Thus we have rhythmic movements of respiration, the heart and the rhythms which we are capable of imparting to our*

voluntary muscular movements. It is probable that all muscular movements of the body, conscious or unconscious, are brought about by a summation of numerous infinitesimal and imperceptible rhythms." Billroth asserts that a fundamental condition of music, namely, the more or less conscious ability to receive and appreciate rhythmic movements, must be innate in man and many animals. This, like most rules, has its exceptions. He found, for instance, that about 2 per cent of the soldiers in the Austrian and Hungarian armies never learn to march rhythmically. These men are not permitted to appear in parades or are transferred to cavalry regiments. Lacking, then, the appreciation of rhythm, which they never can learn, these men are absolutely unmusical, since the ability to apprehend the rhythmic organization of tones into melody is the fundamental and first condition for the comprehension of music.

RHYTHMS APPEAL TO THREE SENSES

Rhythms may be perceived simultaneously by three special senses. They may be heard, seen, and felt in the muscles. As the influence on consciousness may be exerted from three senses at the same time, it is evident that the major part of our nervous system is occupied in this process, a fact which readily explains the marked effect exerted upon the entire organism. Melody, on the other hand, is always more or less dependent upon conventionality, habit and fashion.

What has perpetuated the compositions of such masters as Handel, Bach, Marcello and Scarlatti is not their melodies, which are often strange and uninteresting, but their incisive energy and abundance of wonderful rhythms.

An ingenious American, Dr. Robert Schauffler, has suggested a veritable musical pharmacopeia. After close observation of the influence exercised by music on different kinds of pains he, with the aid of expert musicians, compiled what may be called, "A Musical Prescriber's Companion." For instance, against manic depression he recommends "Wagner's Ride of the Valkyrie," and the prelude of Dvorak's *Carnevale*. For cases of nervous exhaustion following intense work, he prescribes the *Moldava* of Smetana and some songs by Greig. Against intense grief he suggests the execution of some studies of Chopin, *Patetica* of Beethoven and Dvorak's *Concerti* on the cello. Some of Bach's works are indicated for cases of

mental somnolence consequent on the abuse of alcohol. Furious mania is to be treated by the use of pieces with solemn movements as, for instance, The Pilgrim's Choir in Tannhauser. Even in jealousy, there is a musical remedy in the Prelude of the Meistersingers. Dr. Schaufler is convinced that there is a great future for the Medical Pharmacopeia and that it will not be long before a new class of doctors come into existence—medical musicians, who, after having examined the patient will, instead of a prescription, place in his hands a copy of a musical composition. An idealistic view, perhaps, but it represents a student's opinion.

THE PHONOGRAPH AND SURGERY

A certain physician, Dr. Kane of Pennsylvania, employed a phonograph in his operating room, especially while doing operations under local anesthesia. He reports that no matter how anxious, busy or abstracted the surgeon, anesthetist or the assistants may be, the phonograph goes on; it talks, sings, plays and fills the ears of his perturbed patient with agreeable sounds and his mind with other thoughts than that of his present danger. The patient usually converses with the anesthetist on the subject of the pieces played and begs for more when the machine happens to run down.

There are illnesses in which it is highly important to change the key in which the psychological state of the patient is vibrating, and if this change, upon the realization of which depends often the very existence of life, can be brought about by taking advantage of a tendency to vibrate in consonance with a given musical tone, what a vast field of beneficent utility will be reserved for the art of music when allied to that of healing. Pharmacological therapeutics will not lose any of their efficiency in the treatment of disease when side by side mental therapeutics in the form of music pursue the same end.

Finally, we are able to state that the practical application of music in medicine is at present on a firm basis. Its sphere of usefulness, however, is limited to the treatment of the mentally and morally afflicted, in which cases it works like a specific remedy when everything else has failed. Many institutions, notably in New York and Pennsylvania, have taken advantage of this fact and music now forms part of the regular treatment in institutions for mental diseases, correctional institutions, prisons and old people's homes.

Music will never become "a cure all"; there is no such thing, but its usefulness will extend in direct proportion to our understanding of its application in the treatment of a greater variety of human ills.

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ANATOMICO-PHYSIOLOGICAL BASIS FOR LOCAL ANAESTHESIA

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The object of any anaesthetic is to eliminate pain, relax the musculature in the field of operation and prevent shock.

In order to find a rational basis for an anaesthetic which will accomplish the above named objective it is necessary to (1) determine the conductive paths and cortical centers for pain; (2) to find out where anaesthesia must be produced to cause muscular relaxation, and (3) at the same time prevent operative and post operative shock.

Until recently pain was regarded as coming to consciousness in the cerebral cortex, but we now know that the conscious center for pain is in the thalamus. The part played by the cortex consists in evaluating pain. That is to say that accompanying each pain sensation there is an "associated sensation" from the immediate area from which the pain impulse arises. It is this *associated sensation* which not only enables us to localize the source of the pain but also enables the cerebral cortex to place a value or estimate upon it. This fact accounts for variations in different individuals in their reactions to painful stimuli of equal intensity, for the failure of local anaesthesia to produce local analgesia in certain individuals, and for the frequent failure of cerebral depressants and certain hypnotics to relieve pain. In order therefore for an anaesthetic to relieve pain, by action on the conscious centers it must influence the cortex which is reached by the associated impulse of pain or else on the thalamus. Ether and the related hypnotics do this by rendering the

patient unconscious. So we may eliminate pain sensations by a general anaesthetic acting on the conscious center.

Our other attack in order to prevent pain during surgical procedures is to block the pain pathway. In order to do this we must know what fibers transmit painful impressions.

From the time that Mann advanced the idea until very recently we have been taught that only the sensory nerves of the somatic nervous system conduct painful impressions, and more or less plausible explanations were advanced to explain visceral pain in regions not reached by somatic nerves. Since Cajal, DeJerne and others have given us an explanation of referred pain in the structure of the Dorsal Spinal Ganglia, and experimental and clinical evidence have convinced us that all painful impressions are transmitted over the gray rami of the visceral nervous system, we now know the pain paths and where to find them both in the peripheral and central nervous system. So in the use of a local anaesthetic or analgesic we should aim to block the pain pathway, and if in doing so the associated somatic sensation is blocked, so much the better.

Having located our central and peripheral pain units we must next decide where to use our anaesthetic in producing muscular relaxation. It seems to be a popular notion among scientific men, in their conversation at least, that muscles are paralyzed by anaesthetics but they are not by either general or local. It is a physiological fact that muscle tonus is dependent upon the reception of normal afferent stimuli, that normal muscular contraction is also dependent upon the same fact. It is a very simple matter to get a muscular contraction in deep ether narcotics from electrical stimulation of the motor cortex of the cerebrum, and by mechanical stimulation of the motor paths in the cord and the motor spinal nerve roots. In the preparation of this paper we verified these facts as well as proved that by infiltrating the dorsal roots intra-durally we could get complete muscular relaxation, and at the same time motion could be produced in the limb when moved without opposition. The animals showed no evidence of sensory sensation in the anaesthetized area.

I have personally entertained this idea for some time and was pleased to note a report of Rene Leriche's work in which he holds the same views. We hope to go even further and be able to show that only

the non-medullated nerve fibers are affected by local analgesics.

The third objective in anaesthesia is the prevention of shock. Shock consists of at least two factors if not more. As shown by Crile and Dolly it results from quantitative changes in the Nissl granules in the nerve cells. These changes result not from the anaesthetic but from surgical trauma and involve the motor elements of the cerebral cortex if not other elements as well. We should remember that the cerebellum is one of the chief visceral centers as evidenced by its connections with the visceral elements in the spinal cord, and it also plays a leading role in the strength and rhythm with which voluntary muscles contract.

The other factor in shock is the effect upon the visceral nervous system, more especially the visceral motor, and vaso-motor elements of it. We all fear splanchnic paralysis. It is unfortunate that the post-ganglionic fibers are non-medullated. On the other hand it is fortunate that the splanchnic or visceral nerves to the gut and blood vessels act independently of their central connections. Our third objective is therefore to apply a local anaesthetic so that it will not seriously affect the visceral motor system and at the same time prevent the pain and associated impulses from reaching the cerebrum.

With these facts as a basis—i.e. pain paths being over the gray rami communicantes, the cutting off of afferent visceral and somatic impulses producing muscular relaxation, and the disturbances of the visceromotor mechanisms and nissl granules producing shock, we are prepared to seek a location for the application of a local anaesthetic to eliminate pain, to produce muscular relaxation, and to prevent shock.

When we analyze the present methods used in producing local anaesthesia we find there are six or seven points of attack. (Fig. 1), 1. The infiltration of subcutaneous tissues. 2. Blocking of a nerve along its course. 3. Blocking a nerve between the dorsal spinal ganglion and the junction of the visceral motor fibers. 4. Blocking at the ganglion. 5. Root blocking (spinal or intramedullary attack). 6. Splanchnic anaesthesia along the (a) preganglionic and (b) post-ganglionic fibers. Caudal anaesthesia and ganglion blocking are one and the same. Splanchnic anaesthesia and the blocking of the sacral sympathetic in the hollow of the sacrum through the

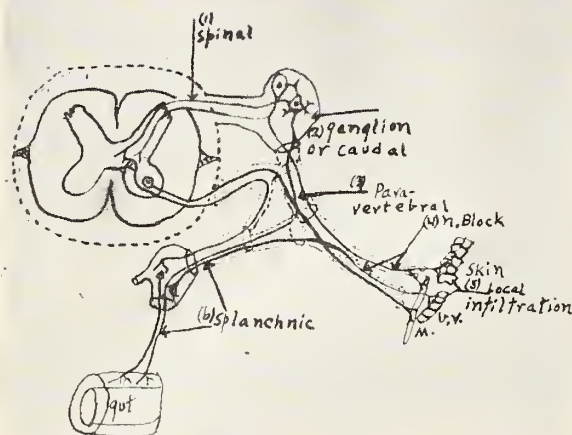


Fig. 1. The above figure indicates the points of attack upon the sensory nerve mechanism in the various methods of local anaesthesia.

ischio-rectal fossa as practiced by the French are one and the same.

The problem now is to select the methods which give the three objects aimed at in local anaesthesia, and eliminate those which do not. Referring to the diagram we note that there are only three out of the seven which do this, and of the three only two are of practical application. They are the (a) spinal and (b) paravertebral and (c) caudal methods. (Fig. 1).

The infiltration method has its advantages in producing haemostasis yet it distorts the structures, lowers tissue resistance, disturbs chemical equilibrium and slows the process of repair because of the effect upon the trophic function, i. e. a vaso-motor effect. Nerve blocking does not distort the tissues, nor disturb the local chemical equilibrium of the tissues but it may produce the same vaso-motor effect unless the pain fibers and vaso-motor fibers have a different and separate course. Infiltration of the dorsal spinal ganglia may do damage to the nerve cell bodies, and are difficult to reach. Caudal anaesthesia also involves the dorsal ganglia of the sacral nerves. In fact it seems to me that ganglion blocking as a whole should be discouraged.

Splanchnic anaesthesia has the objections of being difficult of application; there is such a diffuse and extensive distribution of splanchnic nerves that it requires a large area to be affected in order to work in a small one. It involves the visceral motor, and the vaso-motor systems and the vaso-motor may have a distribution far from the field of operation. Splanchnic infiltration is usually employed to supplement splanchnic anaesthesia with

the objection offered to the infiltration method mentioned above.

While the objections offered to nerve blocking and local infiltration may not justify our discarding them in minor surgery of the extremities, parietes, and some dental work yet these objections become serious when applied to the field of major and splanchnic surgery.

We have left therefore the two methods (a) spinal or intramedullary, and the para-vertebral methods, para-vertebral accomplishing the same thing in the upper part of the body that infiltration of the dorsal sacral foramina does in the sacral region.

Spinal anaesthesia physiologically has the greater hazard attached to it because a trivial injury to the cord may result in disaster. (Fig. 2). Spinal anaesthesia if confined to the dorsal roots permits the visceral motor fibers to escape but in our experiments we found that it is almost impossible to prevent inserting the needle below or anterior to the dorsal roots because of the flatness of the cauda equina, and when the anaesthetic is applied to the ventral roots intradurally the visceral motor fibers become involved.

The remaining method therefore is the paravertebral and dorsal sacral injection. (Figs. 1, 3, 4, 5). In this procedure the anaesthetic is applied proximal to or inside of the junction of the spinal nerves with

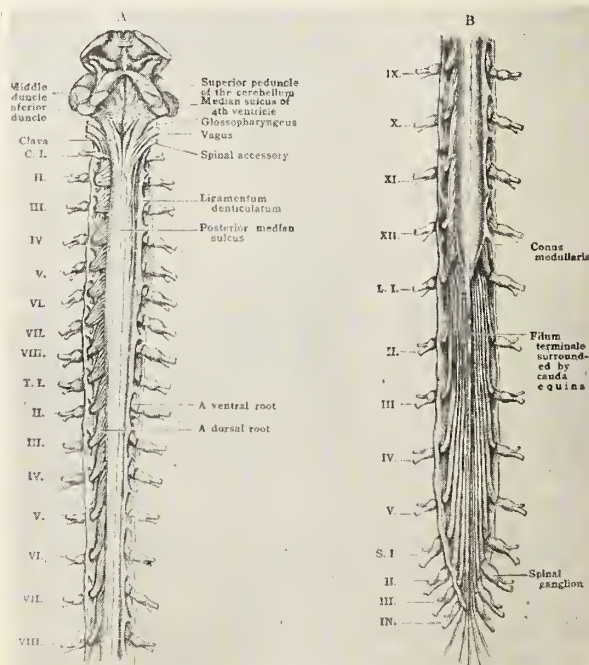


Fig. 2. The above figure shows the meninges of the spinal cord laid open. The structures seen here are exposed to the effects of the anaesthetic in spinal anaesthesia. One cannot but be impressed with the effect which can be produced by anaesthetizing these structures.

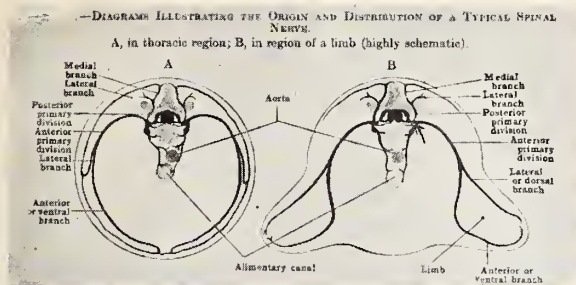


Fig. 3. This figure is from Morris Human Anatomy. It shows the relations of the nerves to the vertebral bodies. The point of the arrow indicates the location for the needle in para-vertebral anaesthesia. The space in the living in which the solution of the anaesthetic can be placed is about three-fourths inch in diameter.

the visceral sensory so that not only the somatic sensory but also the visceral sensory are blocked. The vaso-motor fibers of the spinal nerves escape because they join the spinal nerve distal to the point of injection. The visceral motor fibers escape because they leave the spinal roots proximal to the point selected. The anaesthetic is placed in the dorsal parietes where there is a large muscular mass for absorption, due to the blood supply not being over abundant the absorption process is slow permitting a longer duration of the analgesic effect and a less acute toxic effect results since the destructive process is more deliberate. Therefore, from the physiological viewpoint the para-vertebral method, as suggested by Meeker, is the one of choice.

The objections offered to it in that the technique of application is difficult is not

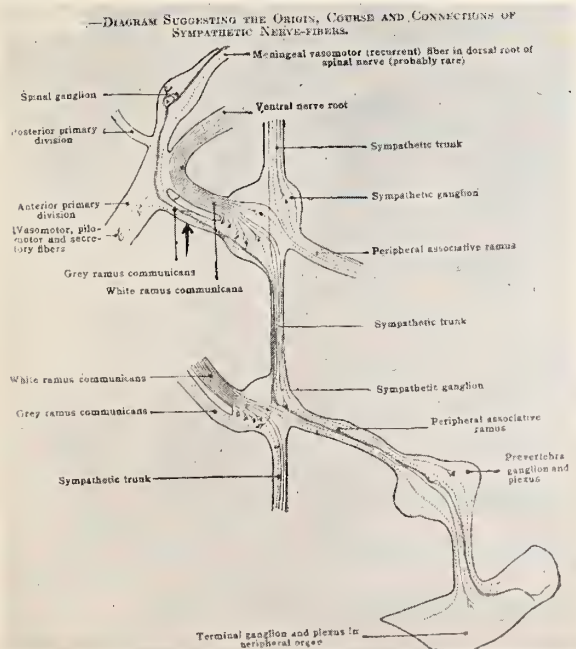


Fig. 4. The above figure is from Morris Human Anatomy. The point of the arrow indicates the point of attack in paravertebral anaesthesia.

valid because a surgeon is not justified in failing to give his patient the best there is in surgery. If he is not master of the technique he should pass the case on to one who is. Others claim that it fails in certain operations. This is due either to poor technique, anatomical ignorance or both.

As an example of the necessity for knowing the anatomical requirements take an epididymectomy. In the region of the

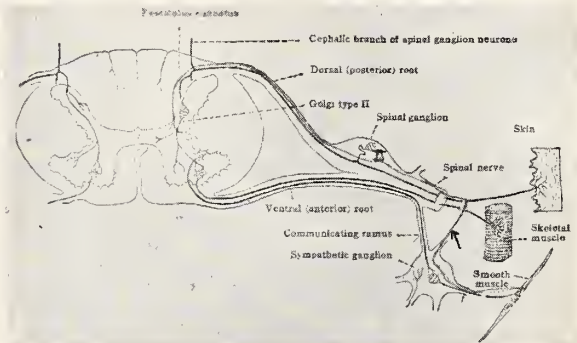


Fig. 5. The point of the arrow in the above figure indicates the afferent sympathetic ramus (pain fiber) on its way to the spinal ganglion. It is this fiber that is blocked in paravertebral anaesthesia. Note that the cell body of this neurone is in the spinal ganglion.

upper scrotum and inguinal ring the source of the nerve supply is from the twelfth thoracic and first lumbar segment for both the superficial and deep parietal tissues. The supply to the testis is from the region of the tenth thoracic segment, to the epididymus from the eleventh and twelfth thoracic and first lumbar and that portion of the scrotum which embryologically is from the perineum is supplied by the first, second and third sacral nerves. The region at the base of the penis has the same supply. So that in order to produce



Fig. 6. The above photographs are taken from fresh autopsy material. They show the variations in the sacral curve. The lower probes point in the direction of the sacral canals. In the picture to the left the uppermost probes indicate the directions which needles must take in entering the sacral foramina. Failure to determine the variation in sacral curvature by external palpation and rectal examination and the corresponding direction of the axis of the sacral foramina account for the difficulties often experienced in inserting the needle in sacral anaesthesia.

analgesia, blocking should be done over all of these areas and one segment further in each direction.

The results of Lowsley and others bear out these assertions. Our own experiments confirm our contentions. We believe that these facts should be taken into consideration and that methods for the production of local analgesia, for that is what it is, based on these facts rests not only upon a firm anatomico-physiological basis but a practical one as well.

In our experiments we used dogs and verified the follownig facts:

1. By infiltrating the dorsal nerve roots intra-durally complete analgesia and complete muscular relaxation results.

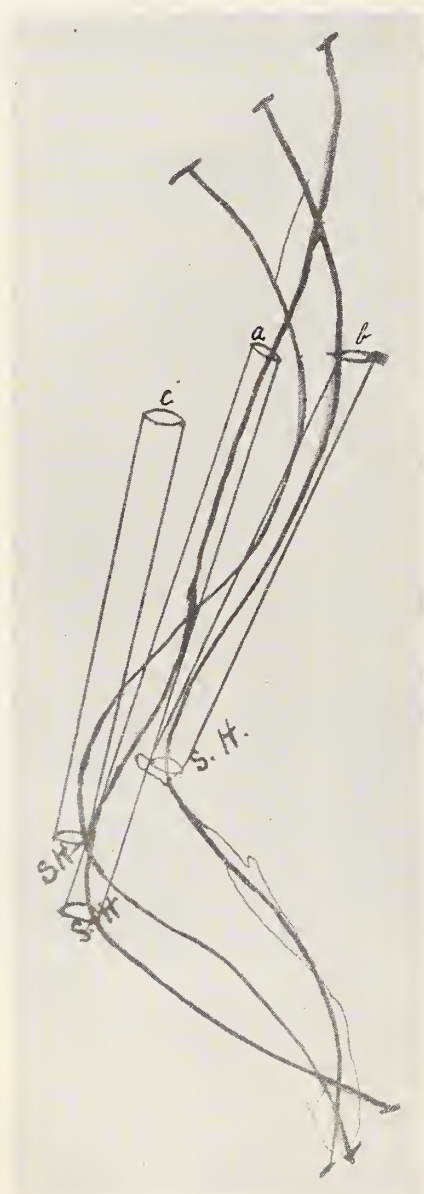


Fig. 7. The tubes in the above figure represent the direction of the sacral canal from the hiatus the specimens a, b, and c in figure 6. Note that a straight needle would pass through b and c, but would be obstructed in a.

2. Closing the sub-arachnoid space above and infiltrating the dorsal spinal sub-arachnoid space with sulphonephenolphthalein, there is no infiltration into the ventral spinal sub-arachnoid space in the short time required for local anaesthetics to act and therefore we conclude that novocaine produces anaesthesia and muscular relaxation by action on the dorsal roots and does not affect the ventral or motor root which is medullated.

3. To study the effect of novo-caine on the visceral motor system we used a spinal dog, tied off a section of bowel and filled it with normal saline and attached a water manometer to it and then infiltrated the splanchnic nerves. The result was a relaxation of the gut wall, viscero motor paralysis. There was a 40 mm. fall in the water manometer in 3 in. of gut 1 in. in diameter.

We plan to study the changes which occur in nerves in the presence of 2% novocaine to see whether a hydrops occurs, or an increase or decrease in H ion concentration as well as changes in electrical resistance. We also expect to show that novocaine acts only on non-medullated fibers, and we believe that ether likewise acts on non-myelinated nerve elements.

Technique for making injections in paravertebral anaesthesia:

The only points which we feel should be emphasized here are the following:

1. In order to reach the sensory rami of the sympathetic in the dorsal region, the needle is inserted just beneath the angle



Fig. 8. This photograph represents eight hemi-sections of sacra taken at random from a large collection. It illustrates the variation in the sacral canal. In the top row at the left the canal is almost straight, the last one in the lower row at the right shows a marked curvature. The curves of the others lie between these extremes.

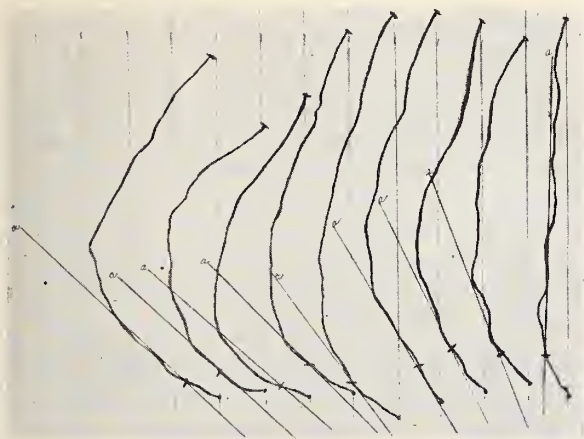


Fig. 9. In the above figure the irregular curved lines represent the curves of nine sacra taken at random. The straight line "a" represents the axis of the sacral canal at the hiatus and the direction a straight needle would take in doing injections through them. The spaces between the vertical horizontal lines represent one-half inch.

of the rib and is then pushed in the direction of the body of the vertebra (Fig. 3) in line with the lower border of the rib and in the middle of the interspace. When the needle strikes the body of the vertebra it is withdrawn about 1 cm. and the injection is then made.

2. In injecting through the sacral foramina it is important to remember that as

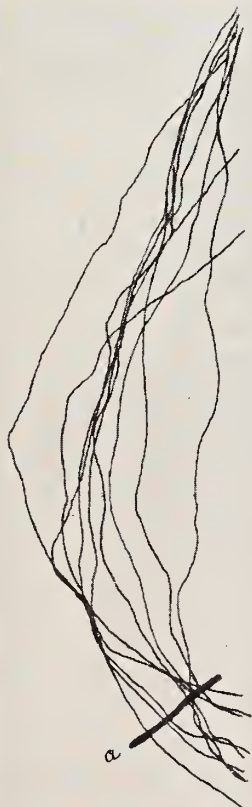


Fig. 10. This figure represents the line of the curves of the nine sacra in figure 9 superimposed. The heavy line "a" represents the location of the hiatus.

the lower foramina are reached it is necessary for the axis of the syringe to be brought more nearly parallel to the axis of the spinal column. In (Fig. 6) the uppermost probe is in the third foramen of the sacrum and the lower one is in the first.

3. In sacral injections through the hiatus it is well to make a rectal examination prior to the injection in order to get some idea of the curvature of the sacrum. The accompanying photographs show the variations to be found in four sacra from persons who had been dead only a few hours when the specimens were secured. These are wet specimens. (Figs. 6, 7). The photograph of dry sacra is of nine sacra which happened to be in a box in the osteological work room and yet the curves of no two of the sacra begin to approximate each other. (Figs. 8, 9, 10).

The lines show the variation in the curvatures, the vertical lines represent a spacing of $\frac{1}{2}$ inch. The other figures show the curves superimposed. These illustrations emphasize the individual skeletal variations, and the importance of considering them.

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THE TREATMENT OF CONGESTIVE HEART CASES

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One of the most powerful diuretics in the pharmacopeia is a complex mercurial preparation containing about 34% of mercury in a non-ionizable combination. It is in fact the double salt of sodium mercurio-chlorpenoxylacetate and diethylbarbituric acid. It is only employed in a 10% neutral sterile solution. This is the drug known as novasurol.

In cases of cardiac dropsy, cirrhosis of the liver, cardiorenal dropsy, nephrosis, congestive heart failure especially when associated with syphilitic myocarditis, it is distinctly indicated. Where the usual heart remedies of the digitalis group have failed, it may be used as a last resort, and with more than a modicum of confidence. It is not indicated where there is a serious kidney lesion. The dosage is in 1 c.c. ampules, which may be worked up to 2, 3 and even 4 c.c., depending on toleration. Mercurial poisoning, diarrhea and salivation have always to be guarded against, and I might here say that the diuretic action of novasurol is very much assisted when ammonium chloride, gr. 10, is given three times a day in conjunction. The ammonium chloride may be continued in smaller doses until the patient is in good condition.

RESULTS IN NINE CASES

I have used novasurol in a fairly large number of cases, from the records of which I now propose to enlarge on nine well-nigh hopeless cases of congestive heart failure treated with the drug at Eloise Hospital. Actually there were quite a number of similar cases so treated—25 in number to be exact—but these nine were the most striking. At Eloise there was presented a wonderful opportunity for experimentation in novasurol treatment. The patients were more than willing to submit themselves to the exposition of the drug, and the assistance and co-operation were of that splendid kind that enables a physician to do his best work. I take the opportunity of here thanking Doctors Saunders, Agins, Hollander, Seymour, Elovzin, and the Institution's Superintendent, Dr. Bennett, for their continuous courtesy and ready assistance during the period of treatment. Without such interested and more than willing help and

co-operation, these experiments could not have been undertaken.

At first we were rather at sea as to procedure, and only the most careful observation, checking and re-checking of results, and perfectly kept records, enabled us to arrive at a definite scheme of dosage and method of treatment. We finally arrived at the stage where a more or less specific formula was adhered to, as follows:

When novasurol is indicated, first give ammonium chloride, gr. 10, t.i.d. On the second day begin with 1 c.c. novasurol intravenously, continuing the ammonium chloride. If no contra indications appear, repeat this treatment on the third day, but step up the novasurol to 2 c.c. If there are still signs of congestive heart weakening and no contra indications, increase the novasurol dosage to 3 c.c. on the fourth day, still continuing the ammonium chloride. Rarely is it necessary to give more than 2 c.c. novasurol, but the ammonium chl. should be continued for some time in diminished doses, repeating the novasurol if there are signs of returning dropsy.

At Eloise, a few of the patients required novasurol once a week for two or three months, but very few of them ever required digitalis during the course of the treatment. With your permission, I shall now proceed to our nine specific cases.

Case No. 290779—O. A., female, age 37. Admitted April 26, 1927.

C. C.—Heart and kidney trouble.

P. I.—Had been sick for three months, beginning with smothering spells every 10 to 15 minutes, also shortness of breath, which came on gradually. There was much cough, blood-tinged sputum, and swollen legs of four weeks duration. Patient had been in bed for two months. There was also pain over precordia.

P. E.—Enlarged heart—no murmurs. A 2-plus—no irregularities. Tachycardia present. B. P. 204/126. Basal rales; ascites; marked pitting edema of arms and legs.

Diagnosis—Myocardial degeneration with congestive heart failure.

Treatment—Patient was first treated with Tn. digitalis and morph. sulph., P. R. N. On May 5th ammonium chl. and novasurol was resorted to when her weight was 228 pounds, B. P. 204/126.

Progress—By May 28th, weight had been reduced to 185 pounds, B. P. then 160/120. The total loss of weight in 23 days was 43 pounds. While this patient was relieved of the edema and in many ways much improved, she was still dyspneic and orthopneic, due we believed to a coronary thrombosis. It seemed in June that the patient had but a short time to live, yet by continuing the novasurol with ammonium chl., she lived until November 6th, and while not well, managed to experience at least some degree of comfort. Suddenly seized with severe pain in the cardiac region, almost impossible to relieve, patient died in 24 hours of a coronary thrombosis.

Case No. 28936—P. G., white, male, age 48. Admitted March 29, 1927.

C. C.—Rheumatism, hacking persistent cough, occasional night sweats.

P. I.—Has had rheumatism all over body—all joints. Swelling of legs and hands with painful

wrists and ankles. Been sick for two months, with a similar attack about one year ago. Walks around with difficulty, but becomes edematous towards evening. Been short of breath for a few years, and is rapidly becoming more dyspneic of late.

P. E.—Wheezing musical rales in both lungs and long noisy expiration.

Left border of heart is 15.5 cm. from mid-line. No thrills felt or murmurs heard.

Liver palpable four fingers breadth below costal margin. Curving and clubbing of finger nails.

Diagnosis—Rheumatism; chronic myocarditis; cardiac asthma.

Treatment—Digitalis was first administered, m xx t.i.d. On May 28th this was stopped and ammonium chl. and novasurol given. Weight was then 163 pounds. Altogether the novasurol dosage was stepped up to 3 c.c., with the result that in five days 26½ pounds reduction in weight was attained.

Progress—There was still some edema, but the general condition was better, appetite improved, and a sense of general betterment noted. The patient continued in fairly good condition with ammonium chl. gr. v t.i.d. nearly all the time with 1 c.c. novasurol occasionally, until July 30th when he died suddenly.

Case No. 28649—White, male, age 30. Admitted April 27, 1927.

C. C.—Dyspnea—felt as if chest was held in a vise. With absolute bed rest would feel better. Coughed blood-streaked sputum.

P. I.—Patient is cyanotic and edematous. This began about two months ago, and is gradually getting worse. Has had hemoptysis. In 1912 had a chancre.

P. E.—Many moist basal rales. Heart enlarged. Thrill felt over mitral and occasional extra systole.

Liver enlarged four fingers breadth below costal margin.

Some ascites present, and pitting edema of extremities.

Impression—Mitral stenosis; chronic myocardial weakening; luetic heart disease.

Treatment—Patient was treated with Tn. digitalis, diuretin, mercuric iodide gr. 1/5, until June 18th, when novasurol was given. Weight was then 152 pounds. After dosage had been stepped up to 3 c.c., a total loss of 22 pounds was attained.

Progress—Patient looked and felt better and the ascites were much diminished. June 30th, he left the hospital to be re-admitted December 15—decompensated. Was tapped six times. During his absence he felt well most of the time. This patient died January 6, 1928.

Case No. 26693—J. M., white, male age 76. Admitted April 28, 1927.

C. C.—Dyspnea and fatigability.

P. I.—Has had attacks for two or three years. Much worse for the past month.

P. E.—Flatness on right side; absent breath sounds; diminished voice sound. Bronchial breath and a few scattered rales heard over left lung.

Heart is much enlarged, dilated and perpetually irregular. Apex beat is diffuse and heaving—impossible to locate apex accurately. There is a low pitched diastolic murmur heard best at second left interspace.

Liver enlarged four fingers breadth below costal margin. Ascites present.

Extremities edematous.

Impression—Right sided effusion; mitral sten-

osis; auricular fibrillation; congested heart weakening.

Treatment—Tn. digitalis was first given until May 28th, when novasurol treatment was instituted. Weight then 139 pounds. In six days after a maximum dosage of 3 c.c. novasurol, 12½ pounds was lost.

Progress—June 15th patient was discharged, hydrothorax unchanged, but heart weakening cleared up entirely. January 4, 1928 this patient was re-admitted to hospital—hemorrhoids—enteritis, but otherwise in fairly good condition, and is still there.

One of the contra-indications of novasurol is albuminuria, yet if the patient has a normal N.P.N., we have on occasion given the drug in spite of a 4 plus albumen. The following is a good example of this:

Case No. 27492—M. F., colored, female, age 50. Admitted February 21, 1927.

C. C.—Wheezing paroxysms of coughing, followed by hemoptysis, dyspnea, and periods of great distention of the abdomen.

P. E.—Apex in 6th interspace, 2.5 cm. to left of mammary line. P 2 is plus.

Liver 2½ fingers breadth below costal margin and tender. Dullness over both lungs at bases. Definite moist wheezing rales heard above dullness.

Impression—Mitral insufficiency; advanced cardiac asthma; chronic parenchymatous nephritis.

Treatment—Medication prescribed at time of admittance was digitalis, bicarb, and citrate of soda, comp. pulv. jalapae, salt free diet, strychnin and morphine P.R.N. at times.

June 18th, patient was in great distress—she then weighed 192 pounds, most of which was due to edema present in lower part of abdominal wall and legs. A catheterized specimen was very dark amber with a 4 plus albumen and many pus cells. No casts were seen.

At this time ammonium chl. grs. v every three hours was given, Kerrell diet started and 1 c.c. novasurol administered. 2 c.c. given the following day, then 3 c.c., with 4 c.c. on the fourth day. Patient then weighed 140½ pounds, having lost 51 pounds in about 4½ days.

Progress—The edema in the lumbar region subsided, and the previous distress not in evidence. Patient much improved and the albumen cleared up. Continuing to be fairly comfortable with occasional doses of novasurol, this patient died December 6, 1927 of congestive heart failure.

Case No. 26526—A. C., colored, male. Admitted April 15, 1927.

C. C.—Complained of stomach trouble and shortness of breath.

P. I.—Has been ill for two years; much worse recently.

P. E.—Heart sounds irregular; systolic and diastolic murmurs heard at apex. General anasarca, with marked ascites. Albumen 2 plus on admittance and weight 228 pounds.

Impression—Cardio-renal vascular triad. Chronic myocarditis; nephritis.

Treatment—After having been given tr. digitalis xxx q.h. 4, the ammonium chl. and novasurol treatment was begun April 16th. By April 23rd, 4 c.c. novasurol had been administered, and on this date paracentesis was performed, when 8 ounces straw colored clear thick fluid was procured. Albumen then negative. By April 25th,

weight was reduced to 162 pounds—a total loss of 66 pounds in 10 days.

Progress—Ammonium chl. was also continued in this case, and on April 30th 1 c.c. novasurol given. Weight further reduced to 156 pounds. Patient felt much better although somewhat dyspneic still. He did fairly well, was comfortable and able to work a little but developed ascites and was tapped five times during the summer. Towards the end of October he suddenly became decompensated and died in three days. Novasurol kept this patient comfortable over a period when other remedies had failed.

Case No. 28867—G. E., male, age 36. Admitted March 23, 1927.

C. C.—Shortness of breath; insomnia; orthopnea.

P. I.—Began to be dyspneic in January and became unable to walk. Cough and hemoptysis developed. All signs and symptoms gradually getting worse.

P. E.—Heart much enlarged; double murmur in mitral area; no thrills felt; throbbing of carotids. Arcus senilis; basal rales; ascites present.

Impression—Enlarged heart with congestive heart failure.

Treatment—This patient was first given large doses of digitalis in conjunction with morph. sulph., without any impression. March 26th ammonium chl. and novasurol were begun, the dose being finally stepped up to 3 c.c. and losing a total weight of about 23 pounds.

Progress—He improved from day to day, until at the end of the course of treatment he could lie down and sleep well, appetite good, and in every way evidenced improvement.

Case No. 29184—C. D. Admitted May 11, 1927.

C. C.—Suspects dropsy.

P. I.—Had cardiac asthma October, 1926. Kidney trouble in last two months. Occasional cough. Abdominal distension interfered with breathing. Had swelling in extremities which went up to abdomen.

P. E.—Heart enlarged. Presystolic murmur audible at apex.

Lungs palpable four fingers breadth below costal margin and tender. Umbilical hernia. No ascites.

Impression—Mitral Stenosis.

Treatment—Novasurol treatment caused patient to void a great deal, and although some pitting in extremities still was present the edema subsided.

Progress—Patient is still in hospital on mercury and iodide. He is not bedfast and feels, he says like himself.

Case No. 28598—E. W., age 29. Admitted September 30, 1927.

C. C.—Nausea, cough, heart trouble for 10 years, dyspnea.

P. I.—Had hemoptysis a week ago.

P. E.—Anemic looking.

Enlarged heart; presystolic murmur; no rales; developed basal rales September 7th; redup. of second sound and signs of decompensation. Edema of lungs.

Diagnosis—Mitral stenosis. Congestive heart failure.

Laboratory—Negative alb. no casts or pus cells. R.B.C. 4448000, W.B.C. 10800, Kahn neg., Poly 66-74, B.P. 98/68, P.M. 30%, L.M. 4%.

Progress—October 7, 1927, novasurol was given in the usual manner, and patient improved, although he was still very weak. He was warned to stay in bed, but on December 6th got up and

wheeled himself to bathroom, where he was found in his chair dead.

While the details of the above nine cases could practically be duplicated in the other sixteen cases treated at Eloise, we so far used novasurol only in desperate cases in which the end seemed near. We think there would be greater and more lasting benefits if the remedy was used earlier before the heart becomes so badly damaged. Unfortunately at Eloise, those patients come to us really to die. It must be understood however that such cases have to be under observation over a long period of time after the initial treatment, as is true of all chronic heart conditions. At the present moment five cases are in the hospital undergoing treatment, and we have every reason to believe that the usual good results will ensue.

Generally speaking it is our experience that with the employment of this drug, those otherwise hopeless cases of congestive heart failure can be restored to a fair degree of health, and in some instances the patients can re-acquire a moderate amount of efficiency. The diuretic action of novasurol is invariably prompt, being usually manifested within 1 to 3 hours, and reaching the maximum effect in 8 to 12 hours. The foregoing reports show a progressive loss of weight of from 12 to 51 pounds, and a daily increase of voided urine of from 5 to 6 quarts has been frequent in our experience. In all treatments which have proved successful—and I must admit I have yet to see many failures—other conditions are invariably benefitted. The drug has been recommended in the treatment of obesity, and although I have had no experience as to its efficacy in this, I am ready to believe that it would be a potent help.

DEMENTIA PRAECOX COMPLEXES*

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A. THE OEDIPUS COMPLEX

Freud was the first to apply the term Oedipus to the complex resulting from a mother-son attachment with a subconscious sex attraction, which, as a result of its efforts to force its way into the conscious, produces violent somatic and autonomic disturbances if a normal adjustment is not made. Freud obtained the term from

* Read before an Interdepartmental Meeting of the Henry Ford Hospital, Detroit, Michigan, March 2, 1927.

the Greek legend or drama, King Oedipus by Sophocles. In synopsis it reads as follows: "Laius, the king of Thebes married Jocasta. After years of childless marriage, King Laius visited the Delphian Apollo and prayed for a child. The Greek God answered as follows: Your prayer has been heard and a son will be given to you, but you will die at his hand, for Zeus has decided to fulfill the curse of Pelops, whose son you once kidnapped. In spite of the warning the son was born, and fearing the fulfillment of the prophecy, the child's feet were pierced and tied, and he was delivered to a faithful servant to be exposed in the desert. The servant, however, gave the child to a Corinthian shepherd who took it to his master, King Polybus, who being childless, adopted it and called it Oedipus, meaning swollen feet. When the boy grew up to manhood he became uncertain of his origin, and consulting the oracle, received the answer:—"Beware that thou should'st not murder thy father and marry thy mother." In order to avoid the fulfillment of this prophecy, Oedipus at once left Corinth and accidentally wandered toward Thebes, where he solved the riddle of the Sphinx, driving the latter to suicide and thus freeing the city from a great scourge. As a reward for this he was elected King and presented with the hand of Jocasta, his mother. He reigned in peace for many years, and begot two sons and two daughters by his unknown mother, until a plague broke out which caused the Thebians to consult the oracle. The messengers returned with the advice that the plague would stop as soon as the murderer of King Laius would be driven from the country. Sophocles then develops the play in a psychoanalytic manner until the true relations are discovered, namely, that Oedipus killed his father and married his own mother. The drama ends by Oedipus blinding himself and wandering away into voluntary exile."***

Freud and Brill believe that this legend had its origin in the common difficulty of the neurotic boy to make transference of his love life from his mother to a proper love object. Such transference means getting away from home and its protective environment and casting off, so to speak, on the unknown sea of life. The primitive fear of the unknown plays a dominant role. This conflict, especially in the neurotic is quite violent, resulting in more or less severe autonomic disturbances. Brill states

that the mental conflict is shown in the content of many incestuous dreams which he has recorded in hundreds of cases.

EMOTIONAL AND MENTAL CATHARSIS

In the cases to be cited shortly, the psychoanalytic principle used is that of inducing an emotional and mental catharsis, which is then followed by a readjustment of the patient's thought processes and emotions. Such principle, then, is the fundamental in the method of treating the anxiety and the distress caused by affective or emotional repression. In other words, the aim is the development of insight through psychotherapy.

En rapport and transference between physician and patient are of primary importance if one is to be successful. Wholesomely interpretative insight into human nature is absolutely essential.

Such effort also requires an entire freedom from prejudice and a sound self-control with an earnest desire to assist the prejudiced, the depressed, and the perverted to readjust, so as to become useful members of society.

Kempf*** insists that, "One of the first principles of a successful psychoanalyst is to recognize that the sexual affections are still the greatest constructive forces of the personality if properly trained and adjusted, and also that they may become the most insidiously and irresistibly destructive forces, if perverted or unconditionally repressed."

OEDIPUS COMPLEX ILLUSTRATED

The case of H. A. will illustrate the Oedipus complex in which an elder and only sister is the mother substitute. Both were entirely ignorant or innocent of any sex factor. There was a subconscious resistance however on the part of the patient, resulting in emotional conflicts which in turn produced physical symptoms as well as a neurosis, due to marked disturbances in the autonomic system. The subjective symptoms connected with the various endocrine and other organic systems, in every case of functional mental or nervous disturbance, furnish one of the most important leads for the psychoanalyst. There is a definite anxiety produced which may vary from a mild malaise to a terrific panic. In the Oedipus complex it is always significant that the patient has not found a suitable love object, his excuse often being that when he finds a girl as

*** Brill, A. A.: *Psychoanalysis*, 3rd. Ed. rev. W. B. Saunders, 1922, P. 332.

*** Kempf, Edward, J.: *Psychopathology*, C. V. Mosby, Co. 1920.

good as his mother he will marry her. His mother, in entire ignorance of the unhappiness and misery she is inflicting upon her son, encourages this attitude on his part by over solicitous concern and affection, and never loses an opportunity to speak disparagingly of any girl acquaintance in whom she feels he is becoming unduly interested.

A brief summary will be given now of the facts brought out during the psychoanalysis which warranted a diagnosis of the Oedipus Complex, also the psychotherapeutic methods used to develop insight. Consultation had been requested in this case by the gastro-intestinal department because of symptoms of neurasthenia. Patient had complained of gastro-intestinal distress, chronic constipation, burning sensations and a feeling of discomfort in the lower abdomen.

H. A. was a single man of 31 years, and an architect by occupation. It was obvious that he was the praecox personality type, and a sex conflict of some kind was suspected. He was questioned in a sympathetic manner regarding his physical complaints in an effort to bring about a transference as soon as possible. All of his subjective complaints were discussed with him and he was encouraged to give them in detail. His early childhood and home life were gone into with great care for possible leads and the following important points brought out. His mother died when he was three years of age and he was raised by an only sister. He states that she took the place of his mother in his thoughts and he has always been very devoted to her. They live with their grandparents who are old and very deaf. His sister has never married and is quite lonesome and unhappy. He has always felt sorry for her. He often referred to her as a wonderful girl and that he had never known a woman like her or one who possessed her many virtues and good qualities. Whenever he could he remained at home with her and whenever he went out socially she always accompanied him. She seldom ever gave him an opportunity to be alone with other girls.

SISTER-ATTACHMENT

During our various visits with him, which covered a period of six months, it was definitely corroborated that his attachment for his sister, in the role of mother, was the chief cause of his inability to make a normal transference of his affections to a proper love object. Several attempts were made in the early part of our psycho-

analytical review to develop insight, but as he continued engrossed in his subjective physical symptoms and considerable resistance was encountered, the examiner desisted in these attempts until several more contacts were made because of the fear of losing en rapport. An attempt was made to assist him to acquire insight by an experiment without bluntly telling him that he was in love with his own sister as a mother substitute. At first hypothetical cases were cited of mother-son attachments during which symptoms similar to his were experienced. He apparently opposed the idea that his case was similar, but it was noted that he improved considerably. He was then urged to seek the society of other girls as much as possible with a view to matrimony. Since he had often stated that he felt quite sure that he was heterosexual in his desires, although he had had no sex experience, he agreed to give the examiner's suggestion a thorough try-out.

About two months later he reported in a very agitated and frightened state of mind stating that he had recently fallen in love and become engaged, and that before he left the young lady's home he had a violent revulsion of feeling. He was in a terrific panic emotionally. Stated he made his excuses to her and returned home. He became nauseated, later vomiting attacks and diarrhoea followed, had a severe headache with vertigo, and was markedly agitated. He was unable to sleep or to eat and could not attend to business.

An attempt was again made to develop insight but he was too agitated to make it successful. He came in again three days later. He continued extremely agitated and frightened about his symptoms. The examiner was able to develop insight to the extent that the patient began to realize that many of his physical symptoms were of mental origin. This relieved him immensely and paved the way for the next step. He was then advised to break his engagement at once. He stated that he had already made tentative plans to do this, as he had felt it would be impossible for him to go through with it.

He was again seen about three weeks later and all of his symptoms had disappeared. He was quite happy and had partial insight, i.e., to the extent that he felt sure that his recent physical symptoms were of mental origin. He did not have insight however as to the cause of his aversion to marriage. Efforts were again made to develop complete insight but these ef-

forts were blocked as he was not ready to give up his sister.

His fiancée came in a few days later. She was a matronly appearing woman, who had been engaged before and was considerably older than the patient. He was probably first attracted to her as a mother substitute. She was quite mystified at his conduct, but was anxious to marry him and solicited the examiner's aid in her behalf.

At the next contact visit efforts were renewed to develop insight. Apparently some degree of success was attained. He was told quite bluntly that he would have to make a complete transference of his affections to a suitable love object in order that his personality, individuality, and masculine aggressiveness could develop to their fullest possibilities. He was warned against the danger of introversion and of emotional regression. He seemed to appreciate the truth of these statements and apparently accepted them.

MOTHER-SON ATTACHMENT

B. H. also illustrates the typical Oedipus complex, or a direct mother-son attachment. Like H. A., whose case we have just received, B. H. was unaware of any sex feature. It is shown that the gradual forcing of emotional regression upon the patient, with frequent marked disturbance of the autonomic apparatus due to fear reactions, which in turn were caused by biological and subconscious opposition, are a direct result of this complex.

B. H. is an American born Hebrew, 25 years of age, single, and an only child. His family history shows that he had a neurotic father and that three paternal aunts were temporarily psychotic. He has been the sole support of his mother since his father's death ten years ago. His occupation is writer and salesman of popular songs for a song publishing company. He has been quite successful up to this time. His chief complaints were nervousness and vague fears, especially when he was away from his mother. Whenever he was on the road, usually when alone in his hotel room at night, he would have severe attacks of fear with marked reactions of the autonomic nervous system. These sensations or reactions would increase the emotion of fear, thus forming a vicious circle. Entire lack of insight was the factor that prolonged and intensified his fear reactions.

He is of the praecox personality type with the usual difficulty in making a transference of his affections to a suitable love object. He had masturbated more or less

since the onset of puberty, thus disclosing the definite autoerotism and narcissism so common in the psychosexual life of children. His adherence to onanism to the age of 25, however, shows an immature and retarded emotional development, largely due to the mother attachment. At the age of 19, intuitively realizing his danger, he made an effort to break away from the invisible bonds that were dragging him down to mental regression.

He stated that he had been in love with a stenographer and was greatly desirous of marrying her. His mother objected strenuously, criticizing and speaking disparagingly of the girl at every opportunity. She had used, also, the plea that he was her sole support. She finally succeeded in persuading him to break his engagement. He was very unhappy over it and told his mother many times that she had "wrecked his life."

Since then he has made no serious attempt to fall in love, but has become more and more attached to and dependent upon his mother. They have been living for several years in an apartment, patient often calling his mother into his bedroom at night on pretext of pain in some part of his body, usually the abdomen. He is quite childlike at such times and is greatly comforted if she will caress him in some way. When temporarily master of this tendency to emotional regression he has been quite successful in his business, but recently he has become more and more panicky when away from his mother for any length of time. His fears, phobias and obsessions dominated and engrossed him more and more until he was discharged from his position. Since that time he has remained at home with his mother and is apparently unable to resist the regression and the introversion of his personality.

DISENTEGRATION OF PERSONALITY

Repeated efforts were made to increase insight but were unsuccessful because of the duration of the complex, and associated causes. Hypothetical cases were cited and he was repeatedly told that emotional regression was taking place, and that his personality development was being blocked because of his mother attachment. He was urged to take steps immediately to break away, and make a transference of his affections and love life to a suitable object. He was warned that a disintegration of his personality was in progress. It was felt that his mother

might save the situation if her co-operation could be obtained. She was telephoned to come in for an interview. The Oedipus complex and its dangers were explained to her in detail. She appeared very much interested and gave a number of details which furnished additional proof that her son was unconsciously attached to her in a sexual way. She had suspected something of the sort, but ignored it. She stated that she had had several opportunities to remarry, but he always opposed it. She appeared quite anxious to co-operate in every way, but it was evident that she did not fully understand her son's danger. The only hope in this case was for his mother to marry and compel patient to do likewise, and establish his own home. Because of the duration of his mental trouble and very limited insight, the success of this plan is exceedingly doubtful.

The success of his treatment will depend to a large extent upon the development of complete insight into his condition and appreciation of his danger with a determined effort on his part to overcome it. The prognosis is exceedingly doubtful, however, because of beginning disintegration of his personality, and emotional regression, usually described as schizophrenia. It is judged that paraphrenia will eventually result in this case.

The latest information concerning patient is that he has gone to California *with his mother*.

B. THE HOMOSEXUAL COMPLEX WITH EARLY PARAPHRENIA

The homosexual complex results from a refusal of an introverted individual to admit frankly to himself that he is homosexual and an inability to make a satisfactory adjustment. The moral, religious and social censors which have subtly arisen within him, are directly responsible for the violent emotional and mental conflicts that result. Lack of frankness with himself leads to constant repression of instinctive urges and a resultant failure to make proper adaptations. Numerous bizarre substitutions result. A normal substitution, for example, is some type of artistic or creative work.

The following cases are quite similar in their origin and subjective symptoms and will serve to illustrate the interpretations briefly stated above. Both cases were referred by the Division of Dermatology because of their insistence that their perspiration had a foul odor. They had been thoroughly examined physically in that

division, and there was an entire absence of proof to substantiate their complaints.

C. F. is an only child, 20 years of age, single. He left college at the age of 19 in the second year. He was first employed as a physical director for boys in a city department of education. During the past three weeks he has been employed in the bookkeeping department of an automobile equipment company.

During the initial contact the examiner noted that patient was the dementia praecox personality type. A sex conflict of some kind being suspected, it was considered significant that he had left college in the second year; that he had been a physical director for boys, and that he had obtained a new position three weeks ago, and as to how he was getting along with his fellow employees in his present position as assistant bookkeeper. After *en rapport* and a partial transference were obtained, he stated that for over two years he had felt that people were avoiding him and making derogatory remarks about him behind his back. He often felt in danger and became very nervous and agitated. He had very disturbing dreams and at times walked in his sleep.

His ideas of self-reference became more marked and at times he thought he could hear an occasional threat. He was often in a state of severe anxiety-hysteria with marked disturbance in the autonomic-vegetative nervous system. His physical symptoms only terrorized him more because of his entire lack of insight.

It was brought out that the content of his ideas of self-reference and his occasional transitory auditory hallucination had a definite sexual coloring. The content representing a repressed fear that he would be thought homosexual. He did not have complete insight for this, however, and attributed the unfriendly attitude in his environment to a fancied bromidrosis.

HOMOSEXUAL CHARACTERISTICS

The psychoanalytic problem was to develop insight and apply psychotherapy enabling him to adjust without a violent emotional upset. For want of time an attempt was made to do this before complete *en rapport* and transference was obtained. He was told that the feeling he had had during the last two years of people avoiding him, and his conclusion that it was due to his perspiration having a bad odor, could be explained by the fact that he was homosexual in his desires and subconsciously felt that others knew it and were avoiding

him, and that he had not yet recognized that fact or admitted it in his conscious mind. He neither denied nor resented the above interpretation, but flushed and smiled in an embarrassed manner. In order to make the admission and his adjustment less difficult, he was then advised to admit frankly to himself that he was biologically or congenitally homosexual, or had become so in early childhood or boyhood. He was further assured that no one in his environment knew of his sexual inclinations and that he should make every effort to conquer the feeling that they were against him.

This type is always informed that there is a large number of homosexuals or inverts who are making a satisfactory sublimation in artistic and creative work, and that many of them are very clever and talented people. This takes away the feeling of isolation and that they are social outcasts despised by all men. He did not return, hence the result of the above psychotherapy is not definitely known. An effort was made to reach him by telephone at his residence. His mother answered, stating that he had secured another position and was getting along very well.

FEELING OF ISOLATION

B. G. is 18 years of age and large for his age. He is an only child. It is quite evident that he is the praecox personality type. He graduated from High school one year ago. Denies any difficulty at home. States that he prefers his mother to his father, but there is no evidence of an Oedipus complex. While attending school he was rather backward socially and took very little interest in the social activities of the school. He had a number of boy friends with whom he was quite friendly and sociable. His crowd cared very little for the opposite sex. States he is quite interested in athletics. He has always admired large men and is quite proud of his physique and his health, suggesting a tendency to autistic love or narcissism. Denies masturbation and sex relations of any type. Admits nocturnal emissions during the last four or five years. The emissions accompany dreams and are "somewhat similar to those dirty jokes you hear in school."

The onset of his present illness was characterized by a feeling that his perspiration had a disagreeable odor and that people avoided him on that account. He first noticed it in October, 1924, during his last semester in High school. He occasion-

ally noticed that when a girl was near him she would hold her handkerchief to her nose and certain boys seem to avoid him, or look at him significantly. This occurred at 9:30 a. m. daily during the recitation period in commercial law and lasted for three weeks. It then became general and every one with whom he came in contact seemed to notice it and avoided him. He was greatly worried, greatly disturbed, and became quite panicky at times. He felt a vague sense of danger, but denies hallucinatory experiences other than olfactory. States that he had been an honor student up to that time, but as a result of the above ideas of reference, he became so worried and confused that he had great difficulty in graduating with his class. He remarked that he "just did get by." Recently he had taken up a business course and the same ideas of reference again became a definitely disturbing factor. He was very much worried and fearful that he would have to give up his course and that he would be unable to succeed at anything.

He came to the Dermatological Division for treatment for bromidrosis and was given a thorough physical examination. It was found that his perspiration had no unusual odor although he insisted that it did. He was referred to the Neuropsychiatric Division for a psychiatric survey and any necessary psychotherapy. While obtaining the above history, patient's personality type was carefully studied and a constant effort was being made to obtain a transference and to establish en rapport, in order that he would talk more frankly concerning his sex desires.

There is sometimes danger of homicide or of suicide in developing insight in this type of case because the most intimate things in the patient's psychic life must be brought to the surface from the subconscious where they are fixed in the form of a complex. It is very essential that transference and rapport be maintained. Extreme tact, tolerance, and broadness of mind are absolutely essential in order to persuade the patient to admit the very thing that he has persistently refused to admit, thereby producing the ever increasing mental conflict due to his determination to repress any and all abnormal sex ideas. A complex, which is a central idea surrounded by a constellation of associated ideas based upon a fear reaction and located in the subconscious, is thereby formed.

The constant effort and struggle of the

complex for recognition and assimilation by the ego results in a more or less severe disturbance in the vegetative nervous system with consequent secondary physical symptoms. These frighten the patient and lead to a secondary fear reaction or an anxiety-hysteria.

The psychotherapeutic method followed was quite similar to that followed in the case of C. F. Similar cases were cited in order that he would not feel isolated and he was warned against further refusal to admit his biological sex urge. He was told that admitting to himself that he was homosexual did not necessarily mean giving in to the urge, but that it did mean that he would be facing facts squarely and no longer fighting an unknown and unseen enemy. He was further informed that the fear element would then be removed, the physical symptoms disappear, and the complex be assimilated by the ego with resultant peace of mind. He seemed much relieved after the above mechanisms were explained to him. They were gone over in detail many times, until it was evident, by his emotional responses, that he had developed insight and was making a mental adjustment. He came to us again two weeks later on reappointment. He no longer complained of his perspiration; stated that he felt much better and was doing better work in school. He had no further fear regarding his associates or his environment. He appeared quite cheerful and happy and stated that he felt he understood himself at last. He did not think it necessary to make another appointment as he felt quite sure of himself.

In the preceding cases the mental mechanism leading to the delusion that they had a bromidrosis which influenced people against them was explained as follows:

They were told that their refusal to admit frankly that they were homosexual resulted in a subconscious substitution of the idea that an offensive body odor was the real cause, for their associates must know that they were invertes by inclination if not by practice. Their conscious minds refused to accept this explanation and the substitution resulted.

As soon as they thoroughly understood this mechanism and made a frank mental adjustment, they recovered from their severe anxiety-hysteria state which would have resulted in a disintegration of the personality and paraphrenia, if not properly treated.

CONCLUSIONS

1. Unless insight is developed and proper adjustment made in these types of cases, a psychosis will probably result.

2. In diagnosing a frank case of paranoid dementia praecox, or paraphrenia, the above mechanism, if intelligently searched for, will usually be found.

3. This type of psychosis is always on a homosexual basis. The Oedipus complex may be confused with it at times, as that complex is an indirect type of homosexuality, and often results in a paraphrenia.

4. It is all important that the above complexes be recognized early and proper treatment given. When the psychosis is once established, the development of insight is more difficult, if not impossible, and psychotherapeutic measures are often useless.

5. The recognition of the symptoms in early childhood, with intelligent neuropsychiatric and co-operative management by parents and by teachers is the best solution of the problem.

6. The Child Guidance Movement, as directed by the National Committee for Mental Hygiene, offers a very practical method of preventing the development of the above abnormal mental states, as well as many others.

7. In writing this paper, no attempt has been made to adhere slavishly to the more dogmatic canons of psychoanalysis. In fact, such adherence has been avoided in the hope that the general practitioner of medicine and qualified laymen may thus acquire a more wholesome attitude toward psychoanalysis and learn to respect it more fully as a special psychotherapeutic method for carefully selected cases, and as a method to be left to those thoroughly trained in its use.

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A FEW FACTS CONCERNING THE TREATMENT OF CANCER

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A failure to recognize the real significance of pre-cancerous and early cancerous conditions is one of the commonest mistakes made in connection with the diagnosis of malignant disease. There are certain regions in which these early cancers and precursors of cancer often are manifest to the careful practitioner, notably the

tongue, the female breast, and the uterus. And yet how frequently it happens that a wart or a chronic fissure of the tongue, even in the presence of advanced leucoplakia, is allowed to persist without any treatment at all, or if treated, is dealt with inadequately and without finality.

Local excision without loss of time, followed by microscopical examination of the tissue which has been removed, is essential in these cases, and there should be no excuse for failing to recommend this course to the patient. In quite a large proportion of the instances in which this measure is adopted early malignant disease will be revealed, and the patient will be able to undergo radical operation with an excellent prospect of permanent freedom from the disease. In the female breast it must be recognized that chronic mastitis, galactocoele, and adenoma are not infrequent forerunners of malignant disease, and in women past forty years of age, treatment by excision and microscopical examination seems to be the logical course to pursue. An erosion of the cervix in a middle-aged woman, is also to be regarded and treated as a possible nucleus of cancer.

Another important point to be emphasized is the necessity for having a microscopical examination made of every tumor removed by operation, however simple it may appear, or from whatever region it has been taken. Such examinations entail a little trouble and expense, but they are necessary. This would also apply to the apparently simple naevi, particularly if these happen to be in a location subjected to frequent irritation, as these are sometimes the precursors of malignant melanotic tumors.

An error which is fairly common, is to mistake a secondary deposit for a primary growth. Perhaps one of the common examples is the removal of a malignant pelvic tumor under the impression that it is a primary growth, whereas, it may be secondary to carcinoma of the stomach or of some other organ. Not infrequently also is a secondary deposit in a bone regarded as a primary sarcoma and naturally this would prove to be an unfortunate mistake if it leads to amputation of the limb. The patient may also be put to much misery by an extensive operation to no good purpose following the radical extirpation of a primary growth, when secondary deposits are already present, although palliative measures in inoperable cases of malignant disease may sometimes be neglected. Occasionally extensive operations for the relief

of the patient's distress are quite justifiable even when a cure is not apt to be expected. For example, section of nerves in the case of advanced buccal cancer, may be of benefit to the patient.

IMPORTANCE OF BIOPSY

Considering again the question of biopsy in doubtful tumors, the general consensus of opinion at present is to guard against delay between such incision and complete operation. In one situation (breast) the two-stage has sometimes proved to destroy all chances of cure in the more malignant forms of cancer. In other locations (uterus and cervix) this is not so serious, but the ideal is frozen section diagnosis and immediate operation when this gives positive evidence of cancer. There is considered the following exception to this plan, i. e., in the lip, removal of the primary growth complete, rather than incision of, is accepted as safe with dissection of the neck lymphatics at a later date, depending on the report from the pathologist as to the malignant character of the primary growth. A precaution I believe we all should observe in surgical procedures for the removal of cancerous growths is to avoid local dissemination of the material in the wound. To achieve this, we must refrain from cutting into the primary growth itself or into lymphatics glands and other tissues which have become involved. Active dissection should be beyond the limits of the growth.

Mr. W. Blair Bell, of Liverpool, has been treating malignant disease for the past six years with lead, reporting good results in the cases that have been indexed as inoperable. He, however, is of the opinion that much work remains to be done in regard to the discovery of a more therapeutically active preparation of lead which is at the same time less toxic generally. All types of malignant growths are probably amenable to the beneficial influence, provided the metal can reach the malignant cells in sufficient quantity. The Research Department of the St. Bartholemew's Hospital, London, England, has been concentrating for the past year on the Blair Bell technic in the handling of certain types of cancer, and the results have been discouraging. Mr. J. Basil Hume, F. R. C. S., England, has charge of this work at present, and spent considerable time at Blair Bell's clinic learning the details before commencing his investigations at St. Bart's. He has up to the present time used it in twenty humans and two hundred

rats, with very unsatisfactory results. The humans were those classified as inoperable, and the rats were those injected with rat sarcoma. The sarcoma nodule in the latter was well formed at fourteen days, and treatment was started at this point. Some got worse and some better. So did the controls. Treatment was instituted in all stages. There have been numerous recurrences among Blair Bell's 700 cases, and his assistants are less enthusiastic than he is regarding this form of cancer treatment.

The results of surgical treatment of cancer as set forth by G. W. Crile, as a result of observation on four thousand five hundred cases would seem to be quite acceptable for practical purposes.

Skin—Radiation, except in cases of pigmented moles which should be excised.

Buccal surfaces—Mucosae of mouth, excision—early cancer of tongue, cautery—early cancer of lip, radium—late cancer of tongue and lip, excision plus block dissection of glands.

Thyroid—Thyroidectomy plus radiation if operable, decompression plus radiation if inoperable, prevention by excision of foetal adenomata.

Esophagus—Gastrostomy for feeding plus radiation.

Breast—Radical operation. The value of radiation is still doubtful.

Stomach—Resection if operable. Gastro enterostomy if inoperable.

Intestines and sigmoid—Colostomy, plus radical operation if operable. Colostomy, plus radiation if inoperable.

Rectum—Colostomy, plus radiation.

Uterus—Fundus, radical operation. Cervix, radiation. (This also coincides with the opinion of Francis Carter Wood).

Genito-urinary organs—Operation plus post-operative radiation in selected cases.

PAROXYSMAL HEMOGLOBINURIA* —REPORT OF A CASE

JOHN HUSTON, M. D.

ANN ARBOR, MICHIGAN

Paroxysmal hemoglobinuria is a rare disease occurring in individuals with late syphilis, who have in their blood, in latent form, a specific hemolysin, which becomes activated when severe chilling of the individual occurs, producing the hemoglobinuria and, at times, other characteristic symptoms.

Very little is known about the many factors which must play a part in predisposing to the development of the hemolysin in a given individual. The hemolysin is known to occur in only a small proportion of those who might be considered potentially susceptible. Several in-

vestigators have found it in from 0 to 15 per cent of patients with latent syphilis, but only an extremely small percentage of these individuals ever develop hemoglobinuria. Basil B. Jones and Chester M. Jones, in their article on this disease in Nelson's System of Medicine, found some 150 cases in the literature. In reviewing about 156,000 records of the Massachusetts General Hospital, they found 9 cases of this disease. At the University of Michigan hospital, one case has occurred among the 60,000 patients admitted since July, 1925. As a rule, an unusual combination of circumstances must be present to produce the initial paroxysm but, once having appeared, subsequent attacks usually occur with less provocation.

Adequate treatment of the early stages of syphilis would appear to be the principal preventative measure. Since exposure and severe chilling of the body surface are important factors in initiating the paroxysms, the logical course for susceptible individuals is to avoid such conditions. The case I wish to present illustrates most of the features of this unusual disease.

C. K., white—age 47—native of Poland—widower—automobile laborer, came to the University Hospital on November 10, 1926, for examination, complaining of a persistent cough of some eight months' duration; slight hemoptysis on several occasions and progressive loss of strength. He had lost very little weight, his appetite had remained good, the sputum was very scanty and the degree of fever, if present, had been slight. His wife had died some weeks preceding the onset of his present illness of pulmonary tuberculosis.

Physical examination, on entrance, showed lung changes indicative of tuberculosis and these findings were confirmed by X-ray. Other changes noted on examination were marked general cyanosis associated with extreme coldness of the hands and feet, slight clubbing of the fingers and sluggish pupils.

On the morning the patient appeared for the above examination, he drove from Detroit in his car. A breakdown occurred on the way, which caused about an hour's delay during which time the patient was severely chilled and shook violently. At this time he noticed that his hands and feet were numb and felt lifeless. This sensation persisted until he reached the hospital some one and one-half hours later, and the vasomotor changes in his extremities were noted on examination.

About one hour after the severe chill, he passed some very dark urine. Upon entrance to the hospital, his urine was still very dark-colored. This specimen was described as being dark-reddish-brown in color. Reaction was acid. The specific gravity was 1.022. There was a slight trace of albumin noted, but no sugar. The sediment contained no red corpuscles, 30 white corpuscles per low power field, rare granular casts, epithelial debris and mucous shreds. Benzidine and guaiac tests were strongly positive for blood. A second specimen some three hours later was essentially

* From the Department of Internal Medicine University of Michigan Medical School.

the same, although of a lighter color. Spectroscopic examination of this specimen showed the presence of oxy-hemoglobin (Dr. Young). A fourth specimen was secured the following morning (14 hours later) and was entirely normal. A long series of subsequent urines were entirely negative for hemoglobin.

The past history was entirely negative for previous attacks of a similar character. No history of venereal disease was obtained. Some five years previously, he had been confined to bed for about seven weeks with a severe infection of his right foot which had followed a rat bite.

The patient was admitted at once. He was under close observation for the following two and one-half weeks. Urinary studies were consistently normal. Temperature and pulse were normal. Repeated sputum examinations were negative for tubercle bacilli. The blood Wassermann was reported four plus. This was corroborated by two subsequent tests. The blood on entrance was as follows: hemoglobin (Sahli) 80 per cent; red blood cells, 4,000,000; white blood cells, 12,000. The blood smear was normal, platelets, 220,000; bleeding time $4\frac{1}{2}$ minutes; clotting time, $2\frac{1}{2}$ minutes.

While under observation, repeated attempts were made to produce another attack of hemoglobinuria. All were uniformly unsuccessful. The procedures carried out were briefly as follows:

One hand was immersed in ice water for five minutes. The urine was collected after one hour and examined for gross and occult blood with negative results. The same procedure was tried and blood bilirubin determinations made before and after one hour after immersion without any evidence of hemolysis. Other attempts were made with larger areas of the body, until finally, the patient was immersed in water at 40° F. for three minutes, sufficient time to produce definite chilling. There was no hemoglobinuria after one hour and no increase in the blood bilirubin.

After two and one-half weeks of observation, the patient was transferred to the Tuberculosis unit, where he continued to improve during the next two and one-half months. While there, he received a course of 40 mercury rubs in addition to the usual tuberculosis regime. The use of arsphenamine and iodides was considered questionable in view of his pulmonary condition. Since discharge, the patient has been under the supervision of the Detroit Department of Health and has done well. There has been no recurrence of the hemoglobinuria.

DISCUSSION

The unusual feature in this case was the resistance encountered experimentally in attempting to produce further paroxysms which is contrary to the usual observation that after the initial attack, the condition may be precipitated by lesser degrees of exposure. The failure to do so in this case probably illustrates why the disease is so rarely seen in the presence of a considerable number of potentially susceptible individuals. The combination of circumstances must be just right for the hemolysin to destroy the corpuscles. While exposure is undoubtedly a major factor, it alone will not produce paroxysms. In this

particular individual, the lowered constitutional resistance associated with his tuberculosis undoubtedly favored the development of the syndrome under unusual exposure. The subsequent failure to produce paroxysms under experimental conditions probably indicate that future attacks will occur only under unusual circumstances, if at all.

SYPHILITIC EXOPHTHALMIC GOITER

VIGGO W. JENSEN, A. B. M. S., M. D.

SHELBY, MICHIGAN

Syphilitic affection of the thyroid gland is a rare clinical entity, but exists in two types; hypoplastic and exophthalmic, and either type may be of congenital or acquired origin. The hypoplastic type is characterized anatomically by adenoma-like structures of great bulk, and functionally by cretinoid states. The congenital exophthalmic goiter is represented in the literature (1) by five cases, all occurring in the same family. It may be questioned that they are true examples of exophthalmic goiter rather than samples of extensive cord syphilis because all of the five patients mentioned had tabetic cord changes. The number of syphilitic infections, resulting in typical toxic goiter syndrome collected from the literature (2) to date was 20 authentic cases.

The symptomatology of syphilitic exophthalmic goiter does not differ from classical goiter; the enlargement of the thyroid gland was present in five of the 20 cases quoted above; tachycardia, i. e., a heart rate of 120 or more per minute was present in all, likewise tremor, and exophthalmus, unilateral or bilateral. The initial onset is usually insidious. Of the 20 cases mentioned, three had a sudden onset of symptoms, 4 only had associated nasopharyngeal lesions, but 13 had a gradual onset. The eruption of symptoms after the primary sore, when a history of such were obtained, had a latency period between the extremes of 10 months and 23 years; likewise, the age incidence is a variable between 18 and 62 years.

The histo-pathology is described (4) by Dr. Frank Smithies, (to our knowledge the only instance on record), in his case as "chronic inflammation and characteristic gummata were present". The Wassermann reaction was positive in 7 of the 20 cases. The remainder, 13, were reported before the advent of the serologic reaction

of Wassermann. The case here reported had a four plus Wassermann reaction.

The metabolism reading was 3 per cent plus in the author's cases. The only other metabolism reading recorded, 46 per cent plus, was in the case of Dr. Frank Smithies. What the reading was in the other 19 cases is not known because no data relative to this question is recorded.

Antisymphilitic remedies are usually successful in relieving the symptoms, but this apparently is not a universal experience for (3) Dr. Santon points out that two varieties of syphilitic goiter may be recognized: namely, early syndromes which are greatly benefited by treatment, and late syndromes which are very resistant to treatment.

ILLUSTRATIVE CASE

The following is a report of a patient of personal observation: Mrs. A. H., age 33, housework, American, M., complains of loss of weight, dizziness and weakness, nausea and vomiting. Loss of weight has been noticed since about six months ago, but more marked lately. Dizziness and weakness has been present about the same length of time, the former is worse during bodily motion; the latter is worse at night, but present on arising in the morning. Nausea and vomiting has been present since two years ago following an attack of influenza, and may come on at any time.

Past History: "Influenza" two years ago; "Gastritis" during past year. Menstrual: Periods regular; quantity, fair; duration, four days; pain, none; pregnancies, three. One 13-year-old boy living, one died shortly after birth, following instrumentation. One died 11 months old, during epidemic whooping cough. No miscarriages.

General: Head hair coming out by handful. Headaches are frequent, come on shortly after arising, located in occipital region or low down in neck between shoulder blades. Eyes: For about two years has had to wear glasses because of weak eyes. Throat, nearly always dry. Chest: Substernal distress constant, no coughs, no expectoration. Heart: Conscious of pounding action which is worse on exertion or stooping, and slight dyspnea.

Stomach: Appetite, poor; no pain, vomits anything, no blood seen in vomitus.

Bowels: Constipation the rule, but has "diarrhea-like", attacks especially this past year, which last two and three days and apparently have no relation to food.

Nutrition: Loss of weight constant, one month ago weighed 118 pounds; best weight, 146 pounds.

P. E. A young woman of apprehensive mien, squirming about in chair, with marked trembling of hands and fingers and tremulous voice.

Mouth: Mucous membrane of pale color, tongue smooth, tonsils appear normal. One carious tooth. (Innocent).

Eyes: Slight widening of palpebral fissure of left eye, also slight lagging of the upper lid.

Neck: Smooth; thyroid barely palpable.

Heart: Precordial pulsation very rapid and diffuse at apex; rate 144, rhythm regular. Soft systolic murmur over apex not transmitted. Muscle sounds of good quality. Pul. and aor. sec.

negative. No murmur in neck. Sys. 140, Dia., 110.

Skin: Marked dermatographia obtained anywhere.

Reflexes: Tremor of hand very marked, and here and there individual spasmodic contraction of muscle fibers. Brachial and Patellar reflexes very exaggerated. Temperature normal. Urine negative; weight 106 pounds.

At subsequent examination following data was obtained: October 2, 1927. Small nodule in border of latissimus muscle, apparently lipoma. No lymphatic enlargement anywhere. Urine negative. Blood picture: Hgln.—Sahli. 40 per cent. W. C. 4, 400 R. C. 3,400,000. Diff. count P. N. 45 per cent S. L. 43 per cent, L. L. 11 per cent.

October 25th, 1927. Metabolism determination 3 per cent plus, Hackley Hospital. Blood sugar 120. Eyeground examination by ophthalmoscope showed in both eyes, multiple fan-shaped red-like areas of pigmentation. First husband died four years ago of rheumatism and curvature of the spine.

November 4th, 1927. Weight 101¾ pounds. Wassermann 4 plus, Grand Rapids. Wassermann 4 plus, from Lansing, November 8th, 1927.

Diagnosis: Syphilitic toxic goiter.

Active simultaneous anti-syphilitic treatment in the form of neoarsphenamine 0.9 gm. at four-day intervals alternating with Bis. 0.2 gm. intermuscular, worked wonders. In ten days she gained 13 pounds and after three arsphenamine injections the heart rate returned to normal, hair ceased falling out, her vision improved, tremors slightly present on the left hand and dermatographia slight.

SUMMARY

1. Exophthalmic syphilitic goiter is a rare clinical entity.

2. The Wassermann reaction is positive in those cases reported in whom it has been carried out.

3. The metabolism reading may, judging from results obtained in two patients, be normal or definitely increased.

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THE DOCTOR IN THE LEGISLATURE

RICHARD W. McLAIN, M. D.

QUINCY, MICHIGAN

Medical legislation is a matter of very recent years. Some of us could write its complete history from personal knowledge. Our life span covers the period during

which any important medical laws were passed. The matter of regulating the practice of the art of healing should be one of the primary and fundamental acts of any people in its social regulation.

The recent waves of crime and insanity and feeble-mindedness demand the services of trained men, not only to discover the cure, but the proper regulation whether by segregation, isolation, sterilization or execution. One can see that these are the fields demanding men trained in general medicine, having knowledge of circumstances and facts pertaining to their regulation.

That these are very grave problems for which a solution must be sought, there is no doubt. They demand expert legislation as well as medication. They are conditions of sickness and disease equal to, if not worse than smallpox, diphtheria or tuberculosis, for these get well or die, while the insane and criminal live on forever. The former diseases may scourge society, but the latter scourge and outrage it.

PHYSICIANS IN THE LEGISLATURE

There should be more medical men in the Michigan legislature. Wayne County has twenty-eight members none of whom is a medical man. Every question of legal procedure of judicial nature is left to the committee on Judiciary, but medical subjects are left to laymen or to druggists. The legal profession have enough representation to demand and command for themselves, and the same is true of every social phase except medicine. The dignity of our profession is dragged through the mud of slimy politics during the trading days at the close of the session. I refer especially to the appropriation for the University of Michigan.

Such vastly important matters as the University of Michigan and other state institutions are compelled to trade the votes of their supporters for the votes of those who represent selfish interests or matters of far less import. Of course the physician will say he can't afford to attend the legislature; neither can I. I wonder if you thought to vote more pay for members of the legislature so you could afford to go if called. You could not afford to go to war but went; which service the more needful is for you to decide.

So far we have said nothing of the regulation of the profession itself. There are no "Issues" in the legal profession. It sees that laws are passed safeguarding its welfare. Medicine is full of cults and more

clamoring to get in, while the long suffering public feels their lack and inefficiency. No one should be permitted to practise the healing art who has not had a course in general medicine. Just to require the basic sciences is in my opinion not enough unless it includes the science of drug healing. Needless routine and theory should be eliminated from medical courses to make room for the practical. The course should include everything of merit in relief of suffering whether drugs, surgery, mechanotherapy or sunlight.

The public recognizes the chiropractor but does not realize its incompetency. Members of the Health Committee said, "they are here, why not regulate them?" And why not?

NOTE—Dr. Richard W. McLain is a member of the House of Representatives and a member of the following standing committees: State Psychopathic Hospital (Chairman, Liquor Traffic, Elections Committee, Judiciary and State Affairs. This paper is a plea for more physicians as members of the legislature. If the public could be made to understand this, it would be a great thing in their favor to have adequate representation of physicians in the legislature at Lansing. In this age of preventive medicine when each year sees important medical legislation proposed, it is highly necessary that such legislation should be passed by men competent to do so. There is a technical side to all legislation whether medical or otherwise which could be greatly improved were it to be passed upon by a committee of experts. The State in its broadest sense recognizes scientific medicine, therefore, everything that pertains to the healing art should be submitted to a committee of persons who have been trained by the commonwealth. This committee could be made up of chosen members of the Michigan State Medical Society or of the State University, or of medical members of the legislature if a sufficient number were available to form such committee. Probably Dr. McLain's suggestion would be best, in as much as if there were adequate representation of doctors in the legislature they could constitute a legalized standing committee on health affairs.—Editor.

PHYSICAL THERAPY AND ITS ADJUNCTIVE VALUE IN MEDICINE AND SURGERY

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DETROIT, MICHIGAN

Despite official recognition by the American Medical Association through the creation of a Council on Physical Therapy; the requirement by the American Medical College of Surgeons that every officially recognized hospital must be equipped with a physical therapy department; and the enthusiastic response of the profession to the persuasive wiles of the purveyors of physical therapy apparatus and appliances,

such therapy is being quite voluntarily discredited by superabundant enthusiasm on the one hand and ultra-conservatism on the other. Only by dispassionate, common sense appraisal of the clinical results ascribed to physical therapy, and of the theories or physics underlying each and every agency so comprehensively embraced within this therapy, can the truth, the whole truth, and nothing but the truth prevail. The imperfectly trained enthusiast is prepared to believe that physical therapy is all but sufficient unto its therapeutic self, needing scanty—if any—assistance from drugs or surgery; just as fatuously, and tragically, does the strictly conventional medicationist and surgeon eschew such apparent—to him—therapeutic chimeras as electro and photo-therapy, in particular. Contempt, anger, or self sufficiency never yet did predispose to clear judgement. The X-ray, hydrotherapy, massage, exercise, both active and passive, are recognized adjunctive forms of valuable treatment but—possibly on account of their thoroughly established position—it would appear as if such integral components of the physical therapy integer were not generically recognized as such.

PHYSICAL THERAPY ATTESTED FACT

The healthful and recuperative powers of sunshine and fresh air are apparent to all, but possibly not equally well recognized as integrants of a physical or natural therapy integer. Subconsciously we may possibly appreciate all this, but conscious reaction to such knowledge can only be concretely and constructively expressed by complete recognition of the fact that physical therapy is only valuable and serves a desirable purpose insofar as it satisfactorily substitutes for otherwise unattainable, natural healthful requisites attributable to the use of exercise, sunshine, fresh air, heat, and water. The beneficial results attainable from some one or more forms of physical therapy are so indubitably attested by Government hospitals, various sanatoria, and numerous private clinics—both here and abroad—that it simply requires judiciously exercised common sense in conjunction with scientific research and practical experience in order to make this therapy generally and popularly available. Crile's experiments have shown that surgical shock is largely determined by cooling of the liver incident to abdominal exposure; diathermy during operation is now recognized routine procedure at the Cleveland Clinic, and also post operatively employed if shock supervene. Stewart has so con-

clusively proven the worth of diathermy in the treatment of pneumonia that it is now a routine application in many hospitals. The reconstructive effects of the ultra-violet and infra-red portion of the sun's spectrum upon rickets and other disorders of malnutrition need only to be mentioned, to emphasize the need for conveniently available substitutes for the scantily available sunshine.

REHABILITATION CLINICS

Rehabilitation and industrial clinics, attached to practically every large industry where accidents are of frequent occurrence, attest to a time and money saving appreciation by the none too sentimental or impressionable business world. So remarkable is the economic saving ascribable to physical therapy that the Aetna Life Insurance Company cheerfully expends thousands of dollars to support such a clinic entirely free for their incapacitated policy holders. The electric scalpel or "cutting current", though surgical in application, is a physical therapy evolution; and conservative surgeons like Kelly of Baltimore and Clark of Philadelphia are employing it to the exclusion of the knife where such a bloodless eradicator and non-disseminator of infection may be pre-eminently preferable.

Convalescence after any severe medical or surgical experience necessarily implies impairment of one or more of the vital functions and an inability to secure the normal amount of healthfully indicated exercise; mechano-therapy appliances, wave and sinusoidal currents, static electricity, are only conveniently and comfortably applicable forms of physical therapy which are flexibly adjustable to any and all needs for exercise—local or general, active or passive.

Heat is universally esteemed as an essential adjuvant to both surgical and medical administrations; diathermy, radiant heat and light lamps, and infrared generators, are only more scientifically correct and precisionally valuable means of administering desired heat than the more popular but far less effective poultices, fomentations, hot water bags, electric pads, and various other convective and conductive sources of inferior thermal response. Stimulation or sedation, as respectively indicated, whether constitutionally or locally, is easily and naturally induced by means of some one or other of the numerous forms of electrically induced heat, static electricity, galvanism, high frequency currents, or

low volt induced currents; direct and indirect bactericidal and metabolic effects may be secured by some form of electrically thermal energy and ultra-violet radiation.

The electro and photo therapy integers of physical therapy being less appreciatively cognizable than those initially referred to, I have more specifically alluded to these former, but all the various component parts of physical therapy are to be considered simply and solely as natural and essential adjuvants to indicated surgery and medication; just as these latter are to be or should be considered as simply adjunctive to indicated physical therapy.

CO-OPERATION FORCES

The internist, surgeon, specialist, all alike are dependent one upon the other; no one can isolatedly boast that his special field of ameliorative or curative endeavor is supremely successful; only by and through the help of each other can the optimum of desired health be laboriously attained. Every medical man can and does personally apply some more or less simple or complicated physical therapy agency or agencies in his daily practice, but physical therapy—like the practice of medicine itself—is too voluminous a field for every physician to expect to personally qualify in all its intricate phases. He consequently should acknowledge that scientific physical therapy involves far more than the simple prescribing of fresh air and exercise; or even the occasional administration of some electrical, mechanical, or photo-therapy appliance; that even a well equipped office does not necessarily imply a correspondingly well equipped mind; and, lastly, that the physical therapist should be a thoroughly experienced physician thoroughly trained to recognize when and when not physical therapy may be adjuvantly or non-adjuvantly indicated.

DR. ANGUS McLEAN HONORED

Made Honorary Professor of Military Surgery and Medicine in the Military School at the University of Warsaw, Warsaw, Poland.

On March 20th a large number of the members of the medical profession and other personal friends of Dr. Angus McLean of Detroit assembled in the auditorium of the Wayne County Medical Society, the object being to witness the presentation of a medal to Dr. Angus McLean from the Military College of Medicine and Surgery of the University of Warsaw, Warsaw, Poland. The medal is an emblem of Fellowship in the Polish Brotherhood of Military Surgeons. Dr. McLean was elected to this honor about a year ago while serving as one of four representatives from the United States at the International Congress of



Angus McLean, M. D.

Surgery, Medicine and Pharmacy, which was held at Warsaw, Poland, in June of 1927.

The presentation of the medal was made by Wladyslaw Kozlowski, Polish Consul located in Detroit. Consul Kozlowski read a letter from Dr. Stanislaus Rouppert, Chief of the Sanitary Staff of the Polish Army, conveying the medical as well as the greetings of the Polish military surgeons to Dr. McLean. The Polish Consul reviewed at length the history of Poland.

Dr. Andrew P. Biddle reviewed the career of Colonel McLean in an address which is here presented in full. Dr. Biddle was introduced by Dr. G. Van Amber Brown, President of the Wayne County Medical Society.

It is with pleasure that I respond to the request of the President to say a few words on the occasion of the presentation of a medal to Dr. Angus McLean by the Consulate of the Republic of Poland in commemoration of his appointment as Honorary Professor of Military Surgery and Medicine in the Military Medical School at the University of Warsaw, Warsaw, Poland; first, because of a lifelong friendship with Dr. McLean; secondly, because I believe that such recognition, as the presentation of the medal, should be given before such a body as this, of which he is an honored member; thirdly, because as one long familiar through family and personal connection with things military and naval, I appreciate what such recognition means to the military recipient; and, fourthly, because my own naval and military life was linked with theirs and probably their association with me was the first relation-

ship of Dr. Angus McLean and especially of his brother, Dr. Allan D. McLean, with the Army and Navy.

I shall not dwell upon the large amount of work done by Dr. Angus McLean in the organization of Base Hospital No. 17, the Medical Unit of Harper Hospital, as you are as familiar with that record as I am, but for the purpose of this evening's ceremony, shall confine myself to the official records of those Allied countries which have honored him; but before doing so shall say a few words of the younger brother, personally known to many of you. When the Spanish-American War broke out in 1898 and the Michigan troops rendez-voused at Island Lake, Governor Hazen S. Pingree honored me with the appointment of Major and Surgeon of the 31st Michigan Volunteer Infantry. I took Dr. Allan D. McLean with me as Chief Hospital Stewart and he served with the troops until they were discharged, winning his Commission in October of that year. It was this service, I believe, which first won his determination to enter the Naval Service, in the Medical Corps of which he has gradually risen in grade until he has now reached the rank of Captain, a grade corresponding to that of Colonel in the Army. When the American Peace Commission met with the Allied Powers in Paris he was appointed Surgeon to the Commission by the President of the United States.

Taking up the bestowal of recognition in chronological order, is first Dr. Angus McLean's appointment to head the Commission to Italy, November, 1917. The result of that work is embodied in a report of the Chief Surgeon of the A. E. F., France, "on observations of the Medico-Military organization of the Italian Armies, in the month of October, 1917, by a committee who, upon the recommendation of the Chief Surgeon of the A. E. F. in France, were permitted to visit these organizations. The time allowed for the tour was 14 days." The report is signed by First Lieut. Bror H. Larsson of our profession, M. O. R. C.

Secondly, the letter from M. W. Ireland, Surgeon General, U. S. Army, under date of May 30, 1918, in regard to the treatment of the wounded British to "Colonel McLean with the higher medical authorities of the British Army:

"The professional results achieved in treating these 600 British wounded were not excelled by any other hospital in the A. E. F. You may well point with pride to the fact that, although many of them were severely wounded, all but one recovered, and he had been so hopelessly shot through the lung and infected before admission as to be practically moribund when he came under your control.

"It also spoke volumes for the discipline and self-sacrificing devotion to duty on the part of your command that when it became necessary to transfuse many of these wounded because of hemorrhage you always had more voluntary donors than were necessary.

"Instead of waiting until the commendation received from the British could be located I thought it better to send you this personal statement in order that you may unreservedly incorporate in any report or history you may now be preparing on the operations of your unit in France, that the British and American authorities keenly appreciated, and at the time officially recognized, the valuable services rendered by your unit in the emergency above described.

"In conclusion, as an Ex-Chief Surgeon of the American Expeditionary Forces, may I not add my own personal appreciation and thanks for the splendid work so uniformly performed by you and your associates of Base Hospital No. 17?"

The letter of appreciation from King George: Buckingham Palace, Col. Angus McLean, U. S. A., M. C. The Queen and I wish you God-speed, and a safe return to your home and dear ones.

A grateful Mother Country is proud of your splendid services characterized by unsurpassed devotion and courage.—George R. I.

The bestowal of the Legion of Honor of France on the recommendation of General Robert Dupleissis, Commanding General of the District of Bourgoynne, Nov., 1928.

The order to accompany the Presidential Party on its return to America, February, 1919: "American Commission to Negotiate Peace, Paris, February 3, 1919. *From:* Rear Admiral Gary T. Grayson, M. C., U. S. Navy, *To:* Chief Surgeon, A. E. F. (through G. H. Q.) *Subject:* Transfer of Colonel Angus McLean, M. C., U. S. Army. It is requested that Colonel Angus McLean, M.D., U. S. Army, of Base Hospital No. 17, now relieved from duty and awaiting transportation to the United States, be assigned to duty to accompany the "Presidential Party" leaving Paris for Washington, D. C., on or about February 15, 1919, sailing on the "George Washington", from Brest, France. Signed, Rear Admiral Gary T. Grayson, M. C., U. S. Navy, Aide to the President of the United States.

You are relieved from further duty with Base Hospital No. 17 and will proceed to Paris, reporting upon arrival to Rear Admiral Gary T. Grayson, Medical Corps, U. S. Navy, for the purpose of accompanying the Presidential party to the United States. You should report to Admiral Grayson before February 15th. When your services are no longer required by the presidential party you will report to the Adjutant General of the Army for further orders. The travel directed is necessary in the military service. Acknowledge receipt. Davis 6:25 P. M. True copy, T. K. Gruber, Captain M. C., U. S. Army.

The letter of appreciation from the Commander-in-Chief of the American Expeditionary Forces, General John J. Pershing: "American Expeditionary Forces—Office of the Commander-in-Chief, April 20, 1919. My dear Colonel: I wish to express my appreciation of the valuable services which you rendered the American Expeditionary Forces. As Commanding Officer of Base Hospital No. 17, at Dijon, you displayed marked ability for organization and administration. The efficiency of your unit reflects great credit upon you. Through the excellence of your service, it functioned properly at all times, caring for hundreds of our sick and wounded soldiers. I regret that I was not able to thank you personally before you returned to the United States. Believe me, Colonel, Very sincerely, John J. Pershing. Colonel Angus McLean, M. C."

His appointment as Honorary member of the Federation of Soldiers and Sailors of France by the Foyer of the City of Dijon, where the Base Hospital No. 17 was quartered, September 15, 1919.

The recommendation of the Surgeon-General of the Army for the Distinguished Service Medal: "Colonel Medical Corps, U. S. Army. As director of the professional services and later as commanding officer of Base Hospital No. 17 and surgical consultant in hospital formations at the front, by his tireless energy, great resourcefulness, and brilliant professional attainments he rendered services of inestimable value in the care of the sick and wounded of the American, British, and French Armies, thereby contributing materially to the success of the American Expeditionary Forces."

To show his humanitarian side, the thanks of the Red Cross of Germany for his valued assistance in raising funds for the relief of the War Orphans of Germany, 1924.

And lastly, his appointment by the President of the United States on the recommendation of the Surgeon-General of the Army as one of four members from the United States to the Fourth International Congress of Military Medicine, Surgery and Pharmacy, at Warsaw, Poland, May 30th to June 7th, 1927, and his appointment as Honorary Professor of Military Surgery and Medicine in the Military Medical School at the University of Warsaw.

With such a record, Mr. Consul, I have the honor to present to you Dr. Angus McLean, late Colonel, Medical Corps, U. S. Army, for further distinction at the hands of the Army Officers' Medical School in Poland.

Dr. McLean's acceptance of the medal was greeted by applause by the audience who arose en masse. The doctor made a suitable address of acceptance.

FREUD AND THE FREUDIANS

Freud as a man of science is a different man from Freud as a man of literature and philosophy. Examining him first as a man of science, we come to the conclusion that he is not a man of science, and it is only by the chance of his profession that he is classed as a scientist. Indeed he himself has recently cut himself out of science by embodying his doctrines under the name "metapsychiatry." Psychiatry is a branch of medicine dealing with mental diseases, and as such aims to be scientific, albeit the aim has not yet reached its target. It is a confession that his doctrines cannot be judged.

In fact, there are very much more valid earmarks which indicate that the Freudian followers are not scientists. You may establish very easily the stigmata by which you shall know science and the scientist, and, conversely, by which you shall know what is not science and the not-scientist. The scientist, in enunciating a doctrine, is careful to state that it is a working hypothesis; the not-scientist enunciates his beliefs with the unction of theology. The scientist himself produces evidence to the contrary of his doctrine, seeks to meet the objections, and laboriously reaches the conclusion that his doctrine meets the tests. The not-scientist either does not cite the arguments against his case at all, or dismisses them with scorn and contumely. The scientist tests his doctrine statistically; he uses statistics, controls and cites a sufficient number of cases before he states his conclusion. He avoids the fallacy of the positive instance, knowing well that you can prove anything you please by citing only those cases

which favor your side. The not-scientist cites only the positive instances, only the cases which seem to favor his assumptions, never by any chance recounts his failures, and gives no inkling that he has ever heard of statistical method by which chance and error are eliminated. In short, he uses the same kind of tactics that the man on the street corner uses to prove his point, namely, by loudly shouting that he is right, misstating cases, and generalizing in a slender-minded way on a single case.—Dr. Abraham Myerson (Plain Talk).

YOUTHFUL CHRISTIAN SCIENCE

He was only a little fellow, of not more than four years, as he entered the grocery store, his bare feet made such a slight noise that another customer who had just been waited on didn't know of his presence until she turned to go and stepped squarely on one of his small toes.

"Oh, dear, did I hurt you?" she sympathized as she realized her carelessness.

"Gee, no, I'm a Christian Scientist," came the reply, as the boy clasped the injured member in both hands and hopped about on his other foot.—Illinois Medical Journal.

ACCORDING TO INSTRUCTIONS

The merchant was reprimanding one of his clerks severely for cheating a new customer.

"But, sir," said the clerk. "You said you wanted your business run according to the Bible."

"I do," said the merchant, "But you wouldn't call cheating going according to the Bible, could you?"

"Well," said the clerk, "Doesn't the Bible say, 'She was a stranger and I took her in'?"—Illinois Medical Journal.

THE JOURNAL
IS
YOUR FORUM—
WE INVITE YOU
TO UTILIZE
IT FOR THE
EXPRESSION OF
YOUR VIEWS
ON
MEDICAL SUBJECTS

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner*

THE HEALTH OFFICER'S MANUAL

(Concluding Installment)

IX. EXCLUSION FROM SCHOOL

1. Definition:—

For the purposes of these Rules and Regulations the words "exclusion from school" shall mean that the persons so designated shall not enter any public or private school and that they shall be kept in their own homes under such restrictions as are designated in these Rules and Regulations as an *isolation*. This exclusion from school and restriction of movement and contact of a person in isolation shall continue for such specific periods of time as are required by these Rules and Regulations for each specific disease.

2. Exclusion for Disease:—

a. Quarantinable Diseases—Any school child who has a quarantinable disease and has been in quarantine for that reason shall be excluded from school for one week after leaving quarantine. The quarantinable diseases are diphtheria, scarlet fever, poliomyelitis, meningitis and smallpox.

b. Placardable Diseases—Any school child who has any of the placardable diseases, viz., measles, whooping cough, mumps, chickenpox, German measles, shall be excluded from school for the periods designated by these Rules and Regulations for each specific disease. Inasmuch as mumps, chickenpox and German measles have almost no serious complications or after-effects, many cases occur not seen by physicians. Because of this many school boards require assurance that children who have been out of school with these diseases are not in an infectious state when they return to school. This assurance is had in many schools by requiring a certificate from the family physician that the child is not in an infectious state. In schools having adequate school inspection children returning to school after having these diseases are not allowed to attend their classes until they have been examined by the school physician and found not to be in a contagious state.

c. Other Diseases—Impetigo, scabies, favus, pink eye, pediculosis (lice and nits). Any school child who has any of these diseases shall be excluded from school under

the following conditions. They shall be excluded until they come to school with evidence of being under treatment that will limit their infectiousness and are not a menace to the other children.

3. Exclusion of Well Children:—

a. When a quarantine is established in a home, school children *not* known to be immune who are living in that home must either remain in the quarantine or go into isolation in another home for a period of one week (17 days if the disease is smallpox). After one week in isolation as defined in these Rules and Regulations, the child may return to school, provided he has no signs and symptoms of any contagious disease.

b. When a quarantine is established in a home, the children who are known to be immune to the disease, as defined in these Rules and Regulations, may be instructed, disinfected and released to live elsewhere and need not be excluded from school at all. If the quarantine is established for diphtheria it is recommended that the immune school children have throat cultures taken the same as all other persons exposed to the disease. If this culture is found positive a virulence test should be asked for at once.

c. When an isolation is established in a home, the school children *not* known to be immune, as defined in these Rules and Regulations, living in a home where there is a case of a placardable disease must be excluded from school for the same period as the case.

d. When an *isolation* is established in a home the school children known to be immune, as defined in these Rules and Regulations, living in a home where there is a case of placardable disease need not be excluded from school at all. The placardable diseases are measles, whooping cough, mumps, chickenpox, German measles.

These Rules and Regulations define immunity to these diseases as being established by a person having had one of these diseases and having recovered from it, provided this fact was made a matter of official record with the local board of health at the time of the illness.

e. Other Diseases—School children living in a home where there is a case of im-

petigo, scabies, favus, pink eye or pediculosis (lice and nits) need not be excluded from school but should be subjected to daily inspection so that they may be referred to their family physician as soon as any of the symptoms of any of these diseases are manifested.

4. Exclusion from School for Symptoms of Disease:—

a. When children are found in school with any definitely diagnosed contagious disease, they shall be excluded from school and subjected to such means for the prevention of the spread of the disease as is required by these Rules and Regulations.

b. When school children attend school with any of the symptoms that might be symptoms of a contagious disease, these children may be excluded from school *for the day*. This "exclusion for the day" should be followed by a notice to the family and the family physician in turn, be notified of the facts of the case. On the following day if these symptoms have disappeared or the family physician advises the school teacher that the symptoms that were the basis of the exclusion were not symptoms of a communicable disease, the child should be readmitted. If the child "excluded for the day" attempts to re-enter school with the same symptoms for which he was excluded, this matter should be called to the attention of the family physician or the physician representing the school board. The most common signs and symptoms which are signs and symptoms of the onset of the common communicable diseases among school children are (1) sore throat, (2) headache or fever, (3) rash or skin eruption, (4) persistent coughing and sneezing, (5) inflamed eyes or abnormal discharge from the nose.

5. Epidemic Procedure:—

a. Closing schools during an epidemic is not good public health practice. It is much better to have the children assemble at the school and to give each one a careful physical examination before the school opens for the day. Any child should be excluded who has any of the signs or symptoms that may be signs and symptoms of any communicable disease. This exclusion shall be for the day only. The following day a true diagnosis of the contagious character of the malady usually can be made. If doubt concerning the true nature of the condition still exists, a second "exclusion for the day" may be applied to the case.

b. For re-admission after an exclusion for any cause or after any absence of three days or more, some school boards require a certificate from a physician.

SCARLET FEVER IMMUNIZATION IN ZEELAND

Children in the public schools and the Christian school at Zeeland are being immunized against scarlet fever by local physicians, the second immunizing injections being given on March 23 and 24. About 270 pupils were treated. These second injections consisted, each, of 3,500 skin test doses except in the case of pupils in the kindergarten and the first grade and in a group of about 30 pupils who showed marked susceptibility by the previous Dick test. In these instances only 2,500 skin test doses were given.

Some reactions were reported, consisting of nausea and vomiting, in some instances accompanied by diarrhea. As a whole, the reactions were of short duration, lasting from one to three hours. They began in from one-half to three hours after the administration of the toxin.

Following the first injections, one mother reported that her child had developed a fever and an eruption which had persisted and formed scabs, and that she did not wish any more injections to be given if such reactions were to be expected. Upon investigation, it was found that the child had a well developed case of chickenpox.

DR. DEACON ON LEAVE OF ABSENCE

Dr. W. J. V. Deacon, Director of the Bureau of Records and Statistics of the Michigan Department of Health, left Lansing April first on a four months' leave of absence to assist in the campaign to complete the Registration Area by 1930. The campaign is sponsored by a special committee of the American Public Health Association.

Forty-three states and the District of Columbia now comprise the Registration Area. Texas is the only large state not included, and Dr. Deacon has been assigned to that territory. He will have headquarters at the State Department of Health at Austin, and his efforts will be directed toward improving the registration of births and deaths until they meet the standards required for admission to the Registration Area.

WHAT THE "SUMMER ROUND-UP" IS

Judging from letters received from physicians throughout the state who have been asked by their local Parent-Teacher Associations to assist in "summer round-up programs," there is some confusion as to just what the "round-up" is and who is responsible for it.

The National Congress of Parents and Teachers originated the "Summer Round-Up of Preschool Children" in 1925. It is, in the words of that organization, "a campaign to send to the entering grade of school (kindergarten or first grade) a class of children one hundred per cent free from remediable defects. The movement is the development of the platform laid down in 1923—that of 'All the Year Round Parenthood'."

The American Medical Association prepared the examination blank whose use is required of all local branches enrolling in the Round-Up. Other co-operating agencies are the American Dental Association, the American Public Health Association, the National Education Association, the United States Bureau of Education, and the United States Children's Bureau.

The National Congress disavows emphatically any intention of duplicating effective health work already being done in a community, and urges local associations to co-operate with existing agencies. Of special interest to physicians and dentists is the statement of the Congress that it should be clearly understood that the organization opposes free medical or dental care in carrying through the correction of defects (except in cases of financial inability) and urges referring the child to the family physician or dentist for treatment.

Because of the close contact of its membership with the homes and schools, the National Congress feels that it is in a particularly strategic position to "round-up" the children for the examinations and to urge parents to have the defects corrected. They realize fully that correcting the defects is the most important part of the program. Again quoting the instructions issued by the Congress to its branches: "Examinations of preschool children may go on indefinitely but unless the parents of the country are made to realize their responsibility in securing the correction of the defects, there will be no lasting results and much of the taxpayers' money will be spent in vain." To insure corrections being made, two examinations are required of all local groups enrolling, one in the spring and the other in September or October.

The Michigan Department of Health has no direct connection with the "Summer Round-Up" program other than that Dr. Lillian Smith, Director of the Bureau of Child Hygiene and Public Health Nursing, is Chairman of Child Hygiene for the Michigan Branch of the National Congress of Parents and Teachers, and as such is

automatically chairman of the Michigan Round-Up. Enrolling of groups is carried on directly by Congress headquarters in Philadelphia, however, and all examination blanks and supplies are sent from there to the local groups. They cannot be secured from the Michigan Department of Health, nor are any of the examination clinics organized or conducted by the Department.

The growth in popularity of the "Round-Up" program has been rapid. From 102 local groups in 22 states in 1923, it has increased to 2,120 groups in 44 states in 1927. Last year Michigan led all the states in enrollment.

SCARLET FEVER IMMUNIZATION AT SCHOOL FOR THE DEAF

Pupils at the Michigan School for the Deaf at Flint were Dick tested by a representative of the Bureau of Epidemiology on April third and fourth. Of the 341 tested, 50 showed positive reactions. This total of 15 per cent positive for the group is much lower than any figure obtained by the department in the past, and a decided contrast to the 58 per cent positive in the Zeeland schools.

Letters have been sent by the Superintendent of the School to the parents of the 50 pupils giving positive reactions, and immunization will be carried out as soon as permission is obtained.

DEPARTMENT SURVEYED

Dr. J. W. Wallace, representing the Committee on Administrative Practice of the American Public Health Association, has just completed a survey of the organization and activities of the Michigan Department of Health. He spent two weeks in Lansing, visiting not only the Department of Health, but also the Department of Agriculture, the Department of Public Instruction, the Department of Labor and Industry, the State Board of Pharmacy, and the Michigan Tuberculosis Association.

Dr. Don M. Griswold, Deputy Commissioner of Health, was in Gary, Indiana, on March 5, 6 and 7, attending the Great Lakes Sanitary Congress.

DEPARTMENT VISITORS

Dr. Mario Magalhaes, of the National Department of Public Health, Brazil, is spending some time in the department of laboratories, assigned by the International Health Division of the Rockefeller Foundation.

Dr. R. St. John MacDonald of the Department of Public Health at McGill University, is also a guest of the department, observing especially the work in the bureaus of epidemiology, vital statistics, and laboratories.

VISITS OF ENGINEERS DURING THE
MONTH OF MARCH, 1928

Inspections of Railroad Water Supplies:
Total 17.

Baldwin	Frankfort (2)
Bay City	Gladwin
Boyne City	Grayling
Cheboygan	Mt. Pleasant (2)
East Jordan	Mackinaw City
East Tawas	Petoskey
Edmore	Saginaw (2)

Inspections and Conferences, Sewerage
and Sewage Disposal: Total 83.

Adrian (6)	Iron Mountain
Ann Arbor	Iron River (2)
Bad Axe (2)	Lansing (2)
Blisfield	Menominee
Caledonia (3)	Mt. Clemens
Caspian (2)	Munising
Chelsea (2)	Muskegon (3)
Coldwater (2)	Northville (2)
Dearborn (2)	Owosso
Durand	Plymouth
E. Grand Rapids (2)	Pontiac (7)
Elk Rapids	Port Huron
Escanaba (2)	Powers (2)
Fenton (2)	Rochester
Flint (3)	Royal Oak (4)
Fremont	South Haven
Grand Rapids (7)	St. Clair
Grayling	Sturgis
Greenville	Vulcan (4)
Hermansville	Wakefield
Hillsdale (2)	

Inspection and Conferences, Water
Supply: Total 63.

Adrian (5)	Iron Mountain (3)
Alpha (5)	Iron River (3)
Amasa (2)	Ironwood (5)
Anvil Mine (7)	Kingsford (3)
Baraga (3)	L'Anse (5)
Big Rapids (2)	Ludington
Birmingham	Menominee (5)
Caspian (3)	Mt. Clemens
Escanaba (2)	Pequaming
Fenton	Ramsay (2)
Gladstone (2)	Wakefield

Inspections and Conferences, Stream
Pollution: Total 4.

Delta	Mt. Clemens
Lansing (2)	

Inspections and Conferences, Swimming
Pools: Total 12.

Adrian (5)	Lansing
Detroit (5)	Menominee

Inspections and Conferences, Miscel-
laneous: Total 12.

Bay City, Address at Plumbers Convention.
Fenton, Sewer and alley right-of-way.
Holly, Girls Camp.
Lansing, Sewage Disposal for School (2)
Lansing, Private well, Sunnyside Gardens, So. Cedar.

Livingston County, Rural School water supply.
Nashville, Garbage.
Oakley Township, Sewage Disposal for
School (2)
South Lansing (Hunters Crossing), County
Drain.
Torch Lake, Y. M. C. A. Camp.
Conferences and Inspections, Institu-
tions: Total 2.
Grand Rapids, Sewage Disposal at Michigan
Soldiers' Home.
Grand Rapids, Water Supply, Michigan Sol-
diers' Home.

PREVALENCE OF DISEASE

	March Report Cases Reported		March 1927	Av. 5 Yrs.
	February 1928	March 1928		
Pneumonia	798	1,039	662	905
Tuberculosis	538	436	419	414
Typhoid Fever	31	19	39	43
Diphtheria	300	282	439	477
Whooping Cough	665	663	609	673
Scarlet Fever	1,233	1,143	1,636	1,706
Measles	2,580	5,839	1,302	2,929
Smallpox	147	154	191	238
Meningitis	15	16	16	16
Polioyelitis	5	2	4	3
Syphilis	1,222	1,448	1,620	1,192
Gonorrhea	586	735	879	761
Chancroid	11	5	9	13

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

March, 1928

	+	—	+ —	Total
Throat Swabs for Diphtheria.....				1263
Diagnosis	22	257		
Release	31	75		
Carrier	20	842		
Virulence	3	13		
Throat Swabs for Hemolytic Streptococci				
Diagnosis	41	102		
Carrier	19	843		
Throat Swabs for Vincent's.....	33	246		279
Syphilis				8523
Kahn	1082	7370	60	
Wassermann			1	
Darkfield				
Examination for Gonococci ..	155	1324		1495
B. Tuberculosis				606
Sputum	93	412		
Animal Inoculations	3	98		
Typhoid				133
Feces	16	41		
Urine	1	9		
Blood Cultures		32		
Widals	8	26		
B. Abortus				28
Dysentery				33
Intestinal Parasites				45
Transudates and Exudates.....				201
Blood Examinations (not clas- sified)				172
Urine Examinations (not clas- sified)				332
Water and Sewage Examina- tions				614
Milk Examinations				92
Toxicological Examinations ..				10
Autogenous Vaccines				
Supplementary Examinations...				185
Unclassified Examinations				574
Total for the Month.....				15574
Cumulative Total (fiscal year)				119601
Increase over this month last year				691
Outfits Mailed Out.....				14746
Media Manufactured, c.c.....				377188
Antitoxin Distributed, units....				2478200
Toxin Antitoxin Distributed c. c.				10470
Typhoid Vaccine Distributed, c. c.				1280
Silver Nitrate Ampules Dis- tributed				3876
Examinations Made by Hough- ton Laboratory				2292
Examinations Made by Grand Rapids Laboratory				7781

THE JOURNAL

OF THE

Michigan State Medical Society

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MAY, 1928

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

POST-GRADUATE CONFERENCE

It has been already announced that a forward movement has been made to meet the needs of the profession of the state for graduate medical education. Details of this will be announced from time to time in The Journal. The big thing however, to which the attention of every member of the Michigan State Medical Society is called is the Post-Graduate Conference that is to be held in Detroit May 15th to 18th under the joint auspices of the Post-Graduate Department in Medicine of the University of Michigan, the Michigan State Medical Society, the Wayne County Medical Society and the Alumni Association of the Detroit College of Medicine and Surgery. Extensive preparations are being made and the responses from surgeons and clinicians of the first rank, outside as well as within the state have been most gratifying. It is hoped that every member of the Michigan State Medical Society who

can possibly do so will attend these clinics. There was never a time in the history of Detroit when the clinical facilities were as varied and as extensive as they are at the present time; and let us add, when hotel accommodations were as adequate as they are at present. During the past two or three years a number of first-class hotels have been erected in Detroit so that the old problem of lack of hotel accommodation has been at last well solved.

The program of the clinics appears elsewhere in this number of The Journal, as complete as it is possible to obtain it at the time of going to press. Remember the date, May 15th to May 18th inclusive.

DR. ANGUS McLEAN HONORED

Elsewhere in The Journal appears an account of the presentation of a medal to Dr. Angus McLean, as well as the announcement of his appointment to the position of honorary Professor of Military Surgery of the University of Warsaw, Poland. Dr. McLean is intimately known to the medical profession of Michigan, having filled the position of President of the Michigan State Medical Society. The presentation was made at a meeting of the Wayne County Medical Society. The doctor's popularity is attested by the fact that when such honors come to him the auditorium is filled with a large and enthusiastic audience of his medical confreres as well as other friends. The Journal takes this opportunity to congratulate Dr. McLean on this latest honor conferred upon him.

PHYSICIANS AS SPEAKERS

In spite of the fact that physicians are said to belong to the great silent profession, there are occasions in the life of every one of them when it would be to his advantage to be able to speak effectively to his group, if not to a wider lay audience. As the years go by organized medical societies are becoming a greater necessity to those who would keep abreast of the progressive changes that take place in both medicine and surgery. Papers are read and discussed as a rule before they find their way into print. The attrition of minds makes for thoroughness. A lecturer or speaker in the preparation and deliverance of his address learns a great deal more than the audience addressed.

One can learn to a certain extent the art of speech by observing the things which appeal to him most strongly in the addresses of others. The first requisite is to have something to say. Of almost equal importance is language, a suitable vocabulary as a vehicle to convey the thought. Every one admires the speaker who gets at his subject as soon as possible, expresses himself clearly and knows when to stop. There is nothing more tiresome than a speaker who talks on against time. As Polonius said:

"To expostulate what duty is
Why day is day, night night, and time is time,
Were nothing but to waste night, day, time,
Therefore, since brevity is the soul of wit
And tediousness the limbs and outward flourishes,
I will be brief."

To begin with apologies of any kind seems out of place. The stale joke is a serious defect. In the discussion of medical papers it would be well were those taking part to have access to the paper sometime in advance of its presentation that they might give it a serious thought. This would enable them to weigh the various points and to formulate their conclusions in the briefest and most expressive phraseology. Discussions would mean a great deal more under such conditions. That extemporaneous speeches are best when they are most carefully prepared is not quite the paradox that it may seem. The best so-called extemporaneous speakers are those who spend the most time in studying and polishing their utterances in general, so that the particular apparently unpremeditated address may seem a masterpiece.

SURGEONS REAL AND PSEUDO

The American Journal of Surgery in discussing this subject deplors the absence of any check on persons who commit so-called surgery without the proper training and qualifications. The Journal goes on to say that during the past thirty years surgery has become revolutionized. The accomplished surgeon operates successfully for conditions that were half a century ago almost always fatal. Surgery today is commonplace. Men possessed of surgical ability are to be found in every hamlet and at every crossroad.

"However, there is a class of physician," continues the American Journal of Surgery, "who will attempt anything for financial gain. He is worse than the casual surgeon. Many of these men never have had

an interne's life nor worked as an apprentice to a surgeon of recognized ability.

"These untrained men graduate, pass a state board examination, open offices and lie in wait for the unsuspecting victims. Without apprehension these surgical prostitutes attempt major surgery. A plausible tongue explains mortality. Morbidity is an unknown condition to this horde; a patient is marked 'recovered' if he or she leaves the sanitarium alive. Naturally these men are never Fellows of the American College of Surgeons. They are usually connected with nothing. They possess keen financial judgment and ability and are able to diagnose the size of the patient's position to pay far better than the pathological condition, if present. This state of things gives medicine and especially surgery a black eye and the sound ethical man suffers in turn."

True, a diploma from a recognized medical college and a state license to practice medicine extend to the possessor rather wide powers. In fact he is limited only by his discretion and common sense. If he has neither, Heaven help the patient. There are, in all walks of life, persons to whom the lure of big financial returns outweighs everything else. In other callings, however, the harm they do is limited to material, lifeless things. Recklessness is largely a matter of temperament whether one is driving while drunk or attempting that for which one is not fitted. It is hoped the abuse of the privilege of which the American Journal of Surgery complains is not wide spread. We have no solution to offer. It is doubtful whether compulsory internship or legal restrictions will abate the condition. Many of the ablest surgeons as well as specialists in other fields have never served internships and some very mediocre men have. Surgeons are to a certain extent born; though it cannot be denied that training is a great factor.

The reference calls to mind a description of the true surgeon by Guy de Chauliac of the fourteenth century: "Let the surgeon be bold in all sure things and fearful in dangerous things; let him avoid all faulty treatments and practices. He ought to be grateful to the sick, considerate to his associates, cautious in his prognostications. Let him be modest, dignified, gentle, pitiful and merciful, not covetous nor an extortionist of money; but rather let his reward be according to his work, to the means of the patient, to the quality of the issue, and to his own dignity."

A. M. A. HOSPITAL REGISTER

The March 24th number of the Journal A. M. A. contained a unique feature in the amount of space devoted to the Association's first edition of the Hospital Register. This Register has entailed an enormous amount of work, when one considers what it means in the way of acquiring and verifying the information there given. It is hoped that its value to the profession will be duly appreciated. The Register covers the hospitals of the United States.

The Michigan section shows that there is a total of 145 general hospitals with a capacity of 13,307 beds, with an average of 9,526 patients. The percentage of occupancy is 71.6 as compared with 66 per cent occupancy for all the general hospitals of the United States. There are 17 hospitals devoted to nervous and mental diseases. Counting other special institutions we have in this state a total of 229 registered hospitals with 32,308 beds.

The A. M. A. Hospital Register gives the list of approved hospitals for the training of internes, for residencies in specialties and whether approved by the American College of Surgeons. Seventeen hospitals of Michigan are approved by the Council on medical education for the training of Internes. Nineteen hospitals with a capacity of 570 beds are not admitted to the Register.

The number of the Journal containing the Hospital Register should be set apart for convenient reference as the information contained is as "up to the minute" as it is possible to get it.

JOHN HUNTER

This year, the fourteenth of February to be exact, marks the 200th anniversary of the birth of John Hunter. Anniversaries of the birth or death of the great and near great afford an opportunity to recall their work, which is always an advantage, for as someone has aptly said, "Destiny reserves for all repose enough." It is to be hoped that those of our readers who go to London will visit the Hunterian Museum of anatomy, one of the finest of its kind in the world. Hunter supplied the nucleus of this most orderly exhibit in his collection of 13,000 specimens duly described and catalogued. His capacity for work was simply appalling. His dissections included not only human subjects but animals as well so that the collection affords a splendid opportunity for the study of comparative anatomy. He dissected and

described over 500 species of animals. His sleep requirements were apparently satisfied by only four to five hours; the remainder of the time was given over to his favorite work, to which he devoted almost his entire income. He would have died in poverty had not the British government purchased his museum for 15,000 pounds.

John Hunter was in a real sense a self made anatomist and surgeon. He owed little to any formal education he had ever received and in this respect he resembled that famous Scotch physician, Sir James MacKenzie, who was anything but precocious during his earlier years. The Hunters were Scotch on both sides of the house. His love for anatomy began at the age of twenty when he went to London to help his older brother, William, a refined and cultured gentleman, with his dissections. John's studies included particularly investigation of the lymphatic system, the veins and the placental circulation, also the nasal and olfactory nerves.

As teacher John Hunter had some unfortunate shortcomings, a diffident manner, and a bad delivery and an uncontrollable temper. He was subject to angina pectoris during his latter years and he was wont to say that he was completely at the mercy of anyone who chose to make him angry. He was connected with St. Georges Hospital as medical teacher but could not get along amicably with his confreres. A conflict with one of them brought on an anginal attack which resulted in his death on October 16th, 1793. He was a scornful Ishmaelite among his professional associates. He took house pupils who were bound to him for five years at 500 guineas. One of his pupils was Jenner for whom Hunter formed a strong attachment.

With the advent of John Hunter, says Garrison, surgery ceased to be regarded as a mere technical mode of treatment and began to take its place as a branch of scientific medicine firmly grounded upon physiology and pathology. He was the founder of experimental and surgical pathology. He made important studies on the repair of tendons using as an example a ruptured tendo achilles sustained by himself in an accident. Among his studies on surgical pathology we have shock, phlebitis, pyemia, inflammation and surgical diseases of the vascular system. Greater enthusiasm hath no man than this; having accidentally inoculated himself with syphilis, he delayed treatment that he might study the course of the disease on himself. He described the hard chancre,

and differentiated the Hungarian chancre from the chancroid ulcer, but strange to say confused syphilis and gonorrhea. His defective education served to protect him from the aberrations of many of his predecessors whom he had never read. His lack of historical perspective however, caused him to come to many conclusions in which he was entirely wrong. Yet so much may be credited to him that he has been mentioned along with Ambroise Pare and Lister as one of the three greatest surgeons of the time.

DOES THIS INTEREST YOU?

This number of The Journal contains the report of the Legislative Commission of the Michigan State Medical Society which should appeal to every practicing physician as well as to those looking forward to medicine as a career. Special attention is drawn to the questionnaire which was sent by the legislative committee to all secretaries of State Registration Boards as well as secretaries of the medical societies in the United States. The sending of questionnaires and the analysis of replies thereto entail no small labor. The summary as well as the comments in this report are deserving of special attention.

Medical practice laws are generally more or less unsatisfactory. The protection of the public by medical legislation is a process of evolution and as such never shall be ideal. Great strides have been made in Michigan since 1899. It is felt, however, in many quarters that the time is ripe for further advance.

Prior to anything definite in the way of legislation is the survey of the situation throughout the United States. This has been done and the results are as complete as it is possible to compile them. Read the experience of other States in the matter of the basic science idea, the single medical board and in many instances, multiple boards for the registration of medical practitioners and cultists.

BASIC SCIENCE LAW FOR MICHIGAN?

The basic science law as understood provides for the teaching of what are considered pure sciences which should be the basis of all education preliminary to the healing art, whether by the regular medical profession or any of the cults. Such sciences include anatomy, bacteriology, chemistry, hygiene, pathology and physiology. The examination for these subjects is by a non-medical board, that is a board consisting of persons who have no direct connection with the healing art as practiced by the regular profession or by any of the so-called cults.

A certificate from a basic science board does not entitle the holder to any privilege in the way of practicing any form of treating the sick. Having satisfied the examiners of his proficiency in these subjects the candidate may then proceed to meet the demands of the regular board of medical registration or of the osteopathic board, or he may enter upon the study of chiropractic or naturopathy or any other "pathy" he chooses.

Dr. W. C. Woodward, Executive Secretary of the Bureau of Legal Medicine and Legislation of the American Association, who is the father of the Basic Science idea, addressed to The Wayne County Medical Society recently on the subject of "Basic Sciences as a Prerequisite for Medical Registration." Dr. Woodward was inclined to the opinion that the situation in Michigan did not warrant the adoption of basic science legislation in-as-much as there were only two boards in this state, namely the Michigan State Board of Registration and the osteopathic board, the licensing of drugless healers coming under the former. The basic science law according to Dr. Woodward was better adapted for states in which there were multiple licensing boards, say four or five.

It was brought out in discussion that the charge of unfairness was preferred by drugless healers against the Board of Medical Registration in the holding of examinations even in spite of that board's endeavor to play fair. One of the members of the Michigan State Board of Medical Registration in discussing this subject declared that in his attempt to be absolutely impartial he called upon a high school teacher to set an examination that would be considered equivalent to that which high school graduates would be expected to pass. The doctors took the questions and prescribed them for a number of candi-

dates for registration as drugless healers. The papers were signed by number instead of name and submitted for marking to the same person who set the questions. The results of the marking ranged from zero to ten marks on an examination where seventy-five was the passing mark. Imagine the health of the people entrusted to persons of such mental calibre.

Legislation authorizing examination in the basic sciences by a non-medical board should appeal strongly to people of intelligence and their influence and support should be enlisted in behalf of the movement to establish a higher educational standard for all who would treat the ills that flesh is heir to.

EDITORIAL NOTES

Norway has recently passed a law threatening all doctors who do not write a plain prescription in a plain way and sign their names in an equally legible fashion, with a maximum penalty of three months imprisonment. Evidently Norway is not afraid of any severe epidemics in the near future with no doctors at hand to take care of the population.

March is said to have the highest pneumonia death rate of any month in the year. Often more than one-seventh of the annual mortality from this single disease occurs in the month of March. So far this condition cannot be ascribed to any single cause but rather to a combination of factors. The fact that the pneumonia death rate is low in the western provinces of Canada and the northwestern states would lead to the conclusion that a cold climate with an average low humidity favor a low mortality from pneumonia.

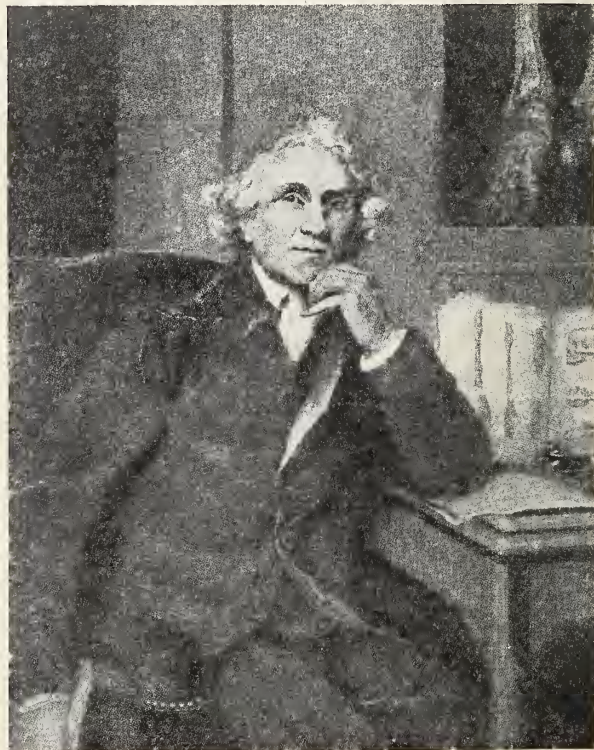
The Seventeenth Century has been truly a wonderful century in the history of medicine. Three hundred years ago this present year Harvey published his *Dissertation on the Circulation of the Blood*, in 1622 Aselli discovered the lacteals and in 1647 Pecquet discovered the thoracic duct; in 1651 Rudbeck demonstrated the lymphatics, and lastly in 1668 Mayow taught that the oxygen of the air which had been recently discovered mixed with the blood in the lungs in the process of respiration.

The history of the medical profession of Michigan is progressing very satisfactorily

under the direction of Dr. C. B. Burr, chairman of the committee. A cut of an old-fashioned two-wheeled gig and one of a letter presenting it to Dr. J. C. Willson, written by Governor Crapo in 1868, have been presented for the history by Mr. George C. Willson of Flint who is the son of Dr. Willson. On behalf of the committee in charge, *The Journal* takes this opportunity to thank Mr. Willson and also Dr. Lucius H. Zeuch, compiler of the *History of Medical Practice of the State of Illinois*, for photographs of Michigan scenes to illustrate the Michigan volume, and for his kindness in loaning the exquisite cut of the pioneer physician. Acknowledgements are also due Miss Labinsky, editor of "The Quill" for the loan of the cut, "The Pioneer" which was used to illustrate Dr. Burr's article on "Physicians with the Early Explorers and Adventurers." The Committee is also indebted to the *Detroit Saturday Night* for the loan of the cut, "Cadillaqua."

JOHN HUNTER—FATHER OF SURGERY

John Hunter, the second centenary of whose birth fell on St. Valentine's Eve, has his name written in the stars among those of masters of medicine who have done most for a suffering and groaning humanity. He remains as perfect a type of the scientific surgeon as Newton of the serene philosopher. His name is familiar from the Hunterian Collection, the anatomical mu-



John Hunter

After the painting by Sir Joshua Reynolds

seum of the Royal College of Surgeons, to which he devoted life and fortune.

The family home was at Long Calderwood in Lanarkshire, where on his father's small ancestral estate his mother was left a widow.

After an idle boyhood, with a minimum of book-learning, John, a shrewd, rough lad of twenty, rode up to London in the autumn of 1748, to join his Brother William, there established as an anatomical lecturer. In his desultory home life he seems to have had no preparation in medical study. Yet forthwith he was set by his brother to prepare a dissection of muscles for a lecture, and within his first session he was directing the students.

THE "RESURRECTION MEN"

Entering Chelsea Hospital as pupil, he was known as a rough, jovial, pleasure-loving fellow, fond of seeing life in queer, low places, and even a favorite with the disreputable "resurrection men" who collected human subjects for anatomists.

At his brother's house he saw good society, eminent surgeons, and also painters whom William liked to gather about him. He was presently induced to go to Oxford; possibly it was William's idea to set him up in practice as a genteel ladies' doctor, but this was not in John's mind. "They wanted to make an old woman of me," he said in later years. "These schemes"—pressing his thumb-nails on the table—"I cracked, like so many vermin."

He was ever rough and downright, given to an inveterate habit of swearing, fierce of mood, quick of speech, of immense vigor as of immense humanity.

He soon exchanged Oxford for St. George's Hospital, and in two years was house-surgeon. In 1761 he went to the wars for a change as staff-surgeon, serving at Belleisle and in Portugal. A treatise on gunshot wounds, based on these experiences, was published after his death.

JENNER A PUPIL

Back in London, he started private classes in anatomy and surgery, which continued for years, his students becoming the first surgeons of their time.

That is one of Tom Taylor's stories, as told in his study of the worthies who lived in Leicester Square. He tells also of the menagerie of creatures Hunter kept in the grounds of a cottage at Earl's Court, from hyaenas, wolves, jackals and leopards, to hedgehogs, bees, wasps and hornets—which formed the subjects of his learned papers for the Royal Society. Among the pupils to whom he would set problems about wild creatures, whether cuckoos, toads or beetles, was the vaccinator, Jenner.

"MEDALS OF CREATION"

Hunter ransacked the world for fossils, and was far beyond his contemporaries in appreciating these "medals of creation." The Council of the Royal Society objected to a phrase in one paper on fossils suggesting that they were many thousand centuries old, this making them older than the Flood. Hunter withdrew the paper, but not the statement.

In 1771 he married Anne Home (beautiful, refined and a gifted poet), for whose hand he had waited for some years until his income had reached a thousand a year, as insisted upon by the father-in-law.

His wife entertained, and Sir Richard Owen

has left a description of how in the small hours the master, with sleep-laden eyes, would brave the social stream on the staircase as he went to bed, not without a kindly greeting to the beauty of the moment.

His researches embraced the hibernation of animals. One speculation was the possibility of freezing human beings, and restoring them to life two or three centuries later, an idea used as the foundation of a romance by Edmund About.

Charles O'Brien, the Irish giant eight feet high, on his deathbed was so terrified lest Hunter should come by his body for dissection that he arranged for a bodyguard to carry his bones to Nore, and sink them far out at sea. The giant dying, the bodyguard did in fact set out for Nore as directed. But next day the giant's bones were in Hunter's carriage as he went on his rounds. Agents had duped the guard, and substituted paving-stones for the body. A portion of the skeleton figures in Sir Joshua Reynolds's portrait of Hunter, one of his masterpieces.

COURAGEOUS POVERTY

Through most of his life he was subject to heart-trouble, which any excitement, even the swarming of the bees he studied for twenty years, would bring on; his life, he would say, was at the mercy of the first rascal to cause him annoyance. And it was at a stormy board-meeting at St. George's Hospital that he died, in his sixty-fifth year.

He died poor, though he had earned as much as six thousand a year, but he had spent £70,000 on his collection, which was eventually bought by the government for £15,000 and entrusted to the Royal College of Surgeons. "It requires great courage in a man to continue poor while it is in his power to get rich," was one of his sayings; and he was ever courageous, even to separating with his hands leopards fighting in his menagerie. Constant additions have been made to the Hunterian Collection, conspicuous among the exhibits being the bones of the giant O'Brien.—Marcus Woodward in *T. P.'s Weekly*, by special permission.

THE ETIOLOGY AND TREATMENT OF THE BLEEDING UTERUS*

HENRY SCHMITZ, M. D.

CHICAGO, ILL.

The investigation is based on about 3,000 consecutive cases admitted to the gynecological departments of Cook County and Mercy Hospital. One-third of these were seen at the Cook County Hospital and two-thirds at the Mercy Hospital. The frequency of occurrence of uterus hemorrhage in the Cook County Hospital cases was more than 45 per cent and in the Mercy Hospital about 25 per cent. It was found that the great frequency of hemorrhage in the Cook County cases was mainly due to infection of the genital tract, myomata and carcinomata; while in the cases at the Mercy Hospital infections and myomata apparently played a minor role. On the other hand, hemorrhagic metropathies, cancers and ovarian disturbances at the beginning and termination of

* This and the following abstracts of papers presented at the Annual Meeting of the American Association of Obstetrics, Gynecologists and Gynecological Surgeons, Asheville, N. C., 1927, are supplied *The Journal of the Michigan State Medical Society* by Dr. James E. Davis, Secretary of the association. Dr. Davis is a member of the Michigan State Medical Society and Professor of Pathology of the Detroit College of Medicine and Surgery.

menstrual life seemed to give a larger percentage of cases accompanied by bleeding. The uterine hemorrhages are grouped according to their respective underlying disease and the treatment of each one is discussed. It is pointed out that at least 50 per cent of so-called functional hemorrhages can be relieved by a curettage and that major surgical measures and X-rays and radium play a minor role in the curative treatment of urine hemorrhage.

THE FLUCTUATION IN BLOOD SUGAR DURING ECLAMPSIA, AND ITS RELATION TO THE CONVULSIONS*

PAUL TITUS, M. D. PAUL DODDS, M. D.
E. W. WILLETTS, M. D.

PITTSBURGH, PA.

SYNOPSIS

Serial blood sugar readings during eclampsia show proof that this disease is associated with an active fluctuation in the sugar content of the blood.

Heretofore only occasional specimens have been taken for blood chemistry, and it has been a matter of general disappointment that no relation could be established between disturbances in blood chemistry and pregnancy toxemias.

These studies now furnish proof that a disturbance in carbohydrate metabolism actually exists in eclampsia; that contrary to the general opinion, hyperglycemia is not characteristic of eclampsia; but that eclamptic convulsions are directly related to and the result of hypoglycemic levels during the course of this disease.

The carbohydrate deficiency theory as to the origin of pregnancy toxicoses is strengthened by these findings, the blood sugar curves actually showing evidence of further depletion of the reserve glycogen stores as the disease progresses.

With the view that convulsions of eclampsia are to be designated as a hypoglycemic reaction the use of insulin either with or without glucose in the treatment of this condition is unnecessary and contraindicated.

Appropriate treatment for eclampsia as established by these glycemia curve studies consists of two main features; (a) complete muscular rest as induced by morphine by hypodermic injection, chloral hydrate by bowel, and magnesium sulphate by hypodermic or intravenous injection, and (b) the intravenous injection of strongly hypertonic glucose solution.

Two results are claimed for these studies: (1) that blood chemistry findings are now available which show the nature of the metabolic disturbances associated with eclampsia, and which go far toward explaining the occurrence of eclamptic convulsions, and (2) that the treatment of eclampsia is no longer purely empiric.

* Paper read at Annual Meeting American Association of Obstetricians, Gynecologists and Abdominal Surgeons.

THE PLACE OF VAGINAL CESAREAN SECTION IN OBSTETRICS*

LOUIS E. PHANEUF, M. D.

BOSTON, MASS.

SUMMARY

1. Vaginal cesarean section is a useful operation when an indication for immediate delivery

* Paper read at Annual Meeting American Association of Obstetricians, Gynecologists and Abdominal Surgeons.

arises in a gravida with a long, rigid, undilated cervix, up to the end of the eighth month of gestation.

2. The operation may be done at term; but here the difficulties are greater, and there is danger of the incisions tearing in the peritoneal cavity because of the large size of the child.

3. A previous low cervical cesarean section complicates the technic of the operation since the anterior peritoneal culdesac has been obliterated. This may predispose to injury to the bladder during delivery.

4. Since the operation is extraperitoneal, post-operative complications are negligible.

5. The puerperium, as a whole, resembles that of any operative pelvic delivery.

6. The low transperitoneal abdominal cesarean section which offers nearly as much protection against infection as does the vaginal hysterotomy has displaced the latter operation in a number of clinics because of its simpler technic.

ABSTRACT OF PAPER, "MODERN OBSTETRICS IN THE HOME"*

JAS. R. BLOSS, M. D.

HUNTINGTON, WEST VA.

Attention is called to the fact that the great majority of women are still delivered in private homes, and that too many obstetrical operations are done in an effort to shorten the time of labor. The indiscriminate use of pituitrin is condemned. Thorough pre-natal care from conception to delivery is insisted upon, including careful physical examination and routine Wassermann. List of articles needed at labor is given to the mother, and when ready sterilized at hospital. A portable obstetrical outfit is described. A graduate nurse aids in each delivery and when possible a senior pupil nurse as well. Rigid asepsis is maintained and careful antisepsis, using four per cent mercurochrome. Obstetrician's preparation is the same as in a hospital for a major operation. After the situation has been correctly estimated no further examinations are done unless specifically indicated. "Bearing down" is discouraged. Delivery is done in dorsal position with limbs extended and feet moderately separated. Immediate repair of lacerations is done, and a careful follow-up insisted upon including office examination six weeks after delivery. The question is discussed as to an out-patient graduate nurse to call on all post-partum cases, financially unable to have private nurses.

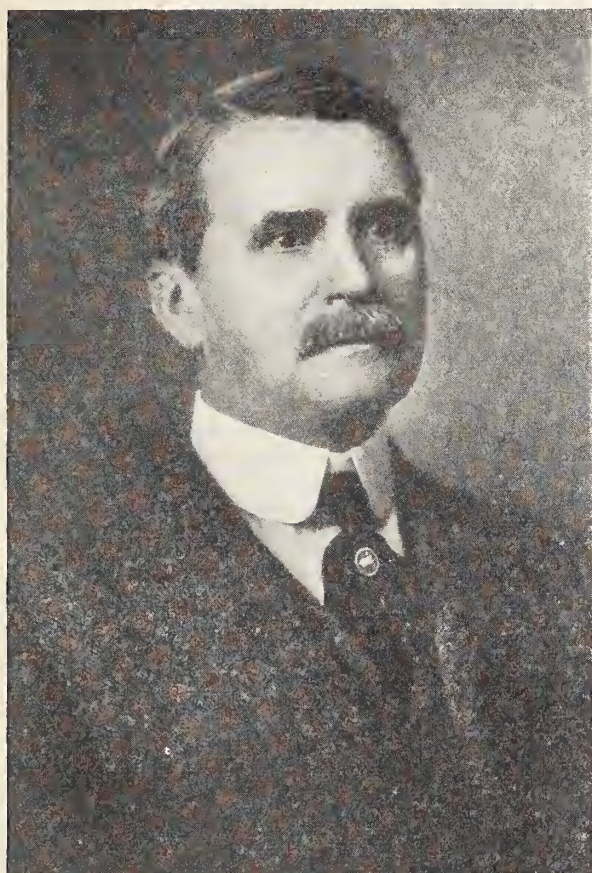
* Paper read at Annual Meeting American Association of Obstetricians, Gynecologists and Abdominal Surgeons.

DEATHS

EUGENE BOISE

1846-1928

Fifty-six years ago young Dr. Eugene Boise, fresh from European study, came to Grand Rapids, associating himself with the leading physician of the community, Dr. George K. Johnson, an association which was to continue for thirty-three years. He had had, for that day, unusual educational opportunities, a graduate of Oberlin College, he had taken a medical course at the



Eugene Boise

University of Michigan, graduating in 1869. He then spent a year at Columbia, (College of Physicians and Surgeons of New York), and a further year as interne at the New York Charity Hospital. With such a background it is not surprising that he was to make a prompt success as a practitioner of medicine, and that he should always carry the highest ideals for medicine. Kindly, cheerful, competent, his patients were devoted to him. Always interested in the young man in the profession, he could be counted on to hold out a helping hand. I have heard it said that he gave away half a dozen practices. This the writer can well believe for he has experienced this liberality. By word of encouragement, by recommendation to patients, by the actual sending of patients, he helped the young man to get started. It seemed as though he felt this to be a real obligation on his part.

Butterworth Hospital and the old Grand Rapids Academy of Medicine were his medical loves. He was on the staff of the first almost since its beginning, chief of staff for a great many years. President of the Academy of Medicine from time to time, he was always a dominant figure in its activities. A fellow of the American Gynecological Society and for some years the only member from Michigan, his name appears frequently in their transactions, and he valued the friendships made through this association as one of the most precious of his possessions. He was president of the Michigan State Medical Society in 1893, and president of the Kent County Medical Society in 1912.

Always a student, a diligent reader, an excellent observer with an investigating turn of mind, it was to be expected that he would frequently

put his pen to paper. He had developed certain theories on surgical shock, and most of his later articles were on various aspects of this. In 1905-6 he did considerable experimental work on dogs, which resulted in several articles—"Nature of Shock," an address before the New York Obstetrical Society, 1906, "The Heart in Shock," a paper before the American Gynecological Society, 1907, "Acute Heart Failure," 1912, and "Shock," 1914. His work on shock gave rise to a most interesting correspondence with others interested in the subject. This was to him a most delightful experience. It so happened that I was in London shortly after these articles came out, and I remember how proud I was to find that Grand Rapids was associated with Boise and to have his work commented upon by English doctors.

It was my privilege to be accepted by him as a friend and intimate, to be received by him and by Mrs. Boise as though I were a member of the immediate family, and as a young man it meant much to me. Today I more than ever appreciate the opportunity which he gave me for contact with a rich mind, ethical, idealistic, ambitious for medical progress, and best of all, intensely human.

We note his passing with the greater regret in that it is significant of the new order in medical practice—the passing of the old-time family doctor. The gain to the public in scientific exactness is balanced by the loss in personal touch and friendliness and love. However, good judgment, resourcefulness and skillful therapeutics went far to make up for the lack of scientific exactness in diagnosis. They were real doctors, these men, primarily interested in getting their patients well, in which laudable ambition they were most successful.—Burton R. Corbus.

IN MEMORIAM

Adopted at the March 30th meeting of the Gratiot-Isabella-Clair County Medical Society:

Dr. Ira Newton Brainerd was born at Grand Blanc, Michigan on February 4th, 1852 and died at Alma, Michigan, March 14th, 1928.

He received his preliminary education at Fenton Seminary, from which he graduated on June 18th, 1875. He also attended the State Normal School at Ypsilanti, from which he graduated on June 27th, 1876.

He received his medical degree at Columbus Medical College on March 4th, 1881.

In 1886 Dr. Brainerd came to Alma, soon after which he gave his whole time to the practice of Medicine and Surgery. Here he remained in continuous practice nearly to the time of his death.

It would be possible in the course of this obituary to mention many interesting circumstances connected with Dr. Brainerd's earlier days in Alma, but we, as members of the profession which he followed, would, I believe, be more interested in those touching more intimately the medical aspects of his career.

The beautiful custom of paying reverent tribute to the dead is by no means modern, but so far as we as individuals and as a nation are concerned, took its rise after the Civil War, when upon the graves of the brave and heroic men who fought in the Northern Army that our country might be one, and upon the graves of the equally brave and heroic who fought in the Southern army for what they considered their constitutional rights, were strewn flowers white, as a symbol of the

purity of their intentions, and flowers red, as a symbol of their martyrdom.

Since then the custom has been so generally adopted that organizations of all sorts set aside a special time for paying tribute to deceased members.

Families, too, have adopted the custom and from time to time through the year the dear ones "loved long since and lost awhile" are remembered in this sacred fashion. Through the passing years, in organized societies and in family life, we have been expressing with flowers and with words of oratory, both our grief and our undying affection for those whose memory we cherish and whose loss we sincerely deplore.

But while it is fitting that we as a Society should eulogize our dead, it is just as fitting, and there is no less obligation, that we should show our appreciation of intrinsic worth while the recipient is still with us and able to judge of our sincerity.

It is a sad fact that many a man goes through this life and out of this life without having ascertained just where he stands in the estimation of his associates, and in the opinion of the community of which he forms an integral part; goes through this life and out of this life without learning from the testimony of his companions in the toilsome way of life, whether alive he was really worth while, or dying will be regretted.

It is not difficult to see the wisdom of the custom of this Society in holding these so-called pre-memorial ceremonies, and no doubt you all recall when some few years ago such a meeting was held in honor of Dr. Brainerd.

What was said and done at that meeting showed our appreciation in a more effective way than anything we might say or do at this particular time.

As a general rule we are very eulogistic of the dead, our praises of the living are comparatively meagre, but we know that Dr. Brainerd knew that this Society held him in high regard, rejoiced in his moral worth and spiritual value, recognized his skill in his chosen profession and appreciated his many excellent qualities.

A man is valuable to a community in proportion to his service and ability. He may have great ability and give little service; he may have little ability and give greater service, but when a man has great ability and gives great service, such ability and service is sufficient proof of his great value. It is indeed a rare privilege to serve a community as long and as faithfully as Dr. Brainerd did.

Coming to Alma in 1886 he was for nearly forty years the leading surgeon of the community and the adjacent territory for miles in every direction. We can all testify to his sterling worth and ability.

Brainerd Hospital, which stands as a monument to his life's work, he built nearly all with his own hands, starting in a meagre way and gradually adding to as time and means would permit.

Dr. Brainerd, except for the past three years, always took a very active part in the deliberations of the Society, served as its secretary from 1887 to 1902 and was three times elected president for the years 1904, 1905 and 1916 and otherwise contributed materially to its success.

Dr. Brainerd was a man of unusual energy, a voluminous reader and during his life collected the largest library in the country. He even found time, besides doing most of the instruction

in his Nursing School, to edit volumes on Physics, Zoology, Chemistry, Biology, Nursing and Hygiene.

There are four most important periods in a doctor's life the first of which is when he is born. The second is the time when he receives his medical degree and steps forth to a life that we all know is not strewn with flowers white nor flowers red.

The third is the time when in sunshine and in storm he treads the weary road of medical practice and, fourth, and last, when time has dimmed the eye and age has shook the hand, he lays him down to well deserved rest.

Courage, earnest service and self-sacrifice marked his daily life.

Peace be to him and peaceful be his rest.

May the earliest buds of flowers white and flowers red spread their fragrance o'er his resting place and there may the summer's latest rose linger longest.

Reported by J. W. Day, Jr., Chairman of Committee.

Dr. H. R. Conklin of Tecumseh died March 17th. Dr. Conklin was 52 years of age. He graduated from the University of Michigan in 1900 and in 1902 started his practice in Tecumseh where he has been for the past twenty-six years. He is survived by his widow and two children.

Dr. Mary Williams of Bay City died April 1, 1928. Dr. Williams was 75 years of age and for the past thirty years was a resident of Bay City and enjoyed prominence not only among those of her profession but among the people of Bay City. Dr. Williams' chief practice was the diseases of women and children.

Dr. Robert A. McGregor of Jackson died March 22, 1928. For twelve years Dr. McGregor was the physician at Jackson prison.

CARBOHYDRATE INDIGESTION

A failure in digestion of the carbohydrates produces quite characteristic symptoms, when the condition is marked. These consist of alternating constipation and diarrhea, associated with a great deal of distention and gurgling in the lower abdomen. When the symptoms are severe, the stools are quite striking, the increased amount of starch, the presence of iodine-staining organisms and the tendency of the stools to ferment. Where the process is not so active, the diagnosing may be more difficult and occasionally must depend on a trial-and-error method of treatment. The differential diagnosis between a carbohydrate indigestion and a mild enteritis has been herein discussed. The treatment consists in the complete removal of carbohydrates for a period of days, which results in complete relief of the symptoms and no tendency to relapse.—E. S. Emery, in the New England Journal of Medicine.

A FILM FOR DOCTORS

A special film for audiences of medical men has been offered to county medical societies for use. "The Doctor Decides" is its title. This film has been approved by a committee of doctors and changes made at their suggestions. County Medical Societies will do well to plan on reviewing this film at their meetings during the next several months. It may be procured by addressing The Michigan Tuberculosis Association, Lansing.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

TRI-STATE MEDICAL SOCIETY

This association, including about one hundred and fifty doctors from Michigan, Indiana and Ohio, held its annual meeting in Detroit on April 10th. The program during the day consisted of clinical conferences by Doctors Edward Spalding and James E. Davis of the Receiving Hospital staff. This was followed by a symposium on Urology by Dr. H. O. Mertz of the University of Indiana, Doctors F. W. Hartman and H. P. Doub of the Henry Ford Hospital, and James E. Davis of the Detroit College of Medicine. Dr. C. C. Sturgis, director of the Simpson Memorial Institute of Ann Arbor, gave an address on recent advances in the treatment of pernicious anemia. Dr. W. H. McCracken of the Detroit College of Medicine, gave a demonstration of the physiological effects of high frequency currents. Dr. J. G. Fitzgerald of the Toronto University, advocated the use of diphtheria toxoid as a substitute for diphtheria toxin. Clinical demonstrations of ring worm were made by Dr. Andrew P. Biddle, president of the American Dermatological Association, and by Dr. R. C. Jamieson. Dr. F. A. Collier and Dr. John Alexander, both of the University of Michigan, took up the subject of empyema. A most interesting paper on post-operative complications was read by Dr. Elliott C. Cutler, Professor of Surgery, Western Reserve University, before a joint meeting of the Tri-State and the Wayne County Medical Society, following a dinner at the Statler hotel in the evening.

Officers for the following year were elected. Dr. W. W. Beauchamp, Lima, Ohio, president; Dr. Robert Hoffman, South Bend, Ind., vice-president; Dr. Norris Gillette, Toledo, Ohio, re-elected secretary, and Dr. D. J. Slosser, treasurer. The councillors selected were Doctors H. H. Martin, John B. Murphy, and J. H. Andries. The next annual session will be held in Toledo.

ST. MARY'S HOSPITAL, DETROIT, ALUMNI REUNION, MAY 12

PROGRAM FOR HOSPITAL DAY

An invitation has been sent to all doctors who have served as house physicians of St. Mary's Hospital, Detroit, to visit their Alma Mater on Hospital Day, May 12. Inasmuch as guests are invited who have served as far back as 1884, it is believed that this will be a memorable occasion for both the doctors and the hospital, and much mutual pleasure is expected therefrom. The program will take the form of a Staff Clinic, lasting from 9 to 12. At 12:30, buffet luncheon will be served on the lawn, after which all will be invited to inspect the various scientific departments.

The program will be as follows:

- 8:00 a. m. "Brain Abscess", Leo Dretzka, M. D.
- 8:00 a. m. Urological Clinic—A. Kersten, M. D.
- 8:30 a. m. Fractures—A. R. Hackett, M. D.
- 8:30 a. m. Traumatic Surgery—L. I. Condit, M. D.
- 9:00 a. m. Uterine Fibroid-Hysterectomy — W. L. Hackett, M. D.
- 9:00 a. m. Hemorrhoids — Caudal Anaesthesia — John J. Corbett, M. D.

- 9:30 a. m. Esophago Bronchoscopy — Wm. J. Cassidy, M. D.
- 9:30 a. m. Ear, Nose and Throat Clinic—E. V. Joinville, M. D., and T. P. Clifford, M. D.
- 9:30 a. m. Eye—W. R. Randolph, M. D.

IN CONFERENCE ROOM

- 10:00 a. m. Obstetrics—Version—J. W. Cunningham, M. D.
- 10:30 a. m. Anemia—R. W. Opperman, M. D.
- 11:00 a. m. Dermatological Clinic—E. C. Troxell, M. D.
- 11:30 a. m. Heart Clinic—Electro Cardiograph —W. J. Wilson, M. D.
- 12:00 m. Neurological Clinic—H. A. Reye, M. D.
- a. m. Laboratory Demonstrations. X-Ray—R. D. McKenzie, M. D. Pathological Laboratory and Autopsy —Jas. E. Davis, M. D. Physiotherapy—J. P. Hubbard, M. D.
- 12:30 p. m. Luncheon served by the Sisters of Charity, St. Mary's Hospital.

ILLINOIS MEDICAL SOCIETY

The Illinois State Medical Society will hold its 78th Annual Meeting at the Stevens Hotel, Chicago on May 8th, to 11th, 1928. The meeting will be a combination Clinical and Scientific Meeting. Elaborate Clinics of unusual interest have been arranged at the larger hospitals, and at the four class A medical schools of Chicago.

Pre and post session clinics have been arranged for Monday, May 7th, and Saturday, May 12th, which will be of unusual interest. All scientific meetings will be held at the Stevens Hotel, which is the largest hotel in the world. Scientific exhibits have been arranged which will interest every physician attending the meeting. The Illinois State Medical Society extends a special invitation to all members of your Society to enjoy this meeting with us. A complete program will be sent to all those requesting same from the Secretary. You can make hotel reservations at this time by writing the Stevens Hotel—the rates are reasonable and the accommodations excellent.

FOR THE STUDY OF GOITER

The American Association for the Study of Goiter, consisting of internists, pathologists, radiologists, etc., as well as surgeons, will hold their 5th annual conference on goiter, in Denver, Colorado, June 18th, 19th and 20th. Several men from foreign countries have signified their intention of attending. Professor Breitner of the Von Eisberg Clinic, Vienna and Professor Albert Kocher of Berne, Switzerland, have accepted places upon the program. Addresses and discussions on prophylaxis, medical treatment, endemic goiter and cretinism from the public health standpoint, are on the program for the first afternoon. All members of State Medical Societies are invited to attend.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EDITOR: Frederick C. Warnshuis, M. D.

Secretary Michigan State Medical Society

Post-Graduate Clinics

Presented Under the Auspices of the Wayne County Medical Society and the Alumni Association of the Detroit College of Medicine and Surgery

A PART OF THE POST-GRADUATE EDUCATIONAL PROGRAM

OF THE

MICHIGAN STATE MEDICAL SOCIETY

AND THE

DEPARTMENT OF POST-GRADUATE MEDICINE, UNIVERSITY OF MICHIGAN

Detroit, May 14, 15, 16 and 17

CLINIC ON NEOPLASTIC DISEASES

Chairman, H. E. Randall, M. D., Flint, Mich.,
President Michigan State Medical Society.

May 14, 1928

*Amphitheater at Harper Hospital**

- 9:00 a. m. William Seaman Bainbridge, M. D., New York, N. Y. Professor of Surgery New York Polyclinic Medical School and Hospital.
Subject, "Malignant Disease—A Survey."
- 9:30 a. m. Hasley J. Bagg, Ph. D. Biologist, Memorial Hospital, New York and Associate in Anatomy at Cornell University Medical School.
Subject, "Experimental Studies in Cancer of the Breast."
- 10:00 a. m. James E. King, M. D., Buffalo, N. Y. Professor of Gynecology, University of Buffalo Medical College.
Subject, "Carcinoma of the Cervix. (Illustrated)."
- 10:30 a. m. Aldred Scott Warthin, Ann Arbor, Mich. Professor of Pathology, University of Michigan.
Subject, "The Present Status of the Cancer Problem."
- 11:00 a. m. William S. Stone, M. D., New York, N. Y. Surgeon to Memorial Hospital, New York, N. Y.
1:00 p. m. Clinic, "Malignant Neoplasm."
- 2:30 p. m. Henry R. Varney, M. D., Detroit, Mich. Professor of Dermatology, Detroit, College Medicine and Surgery, Detroit, Mich.
Subject, "Early Roentgenology in Detroit."
- 3:00 p. m. P. M. Hickey, M. D., Ann Arbor, Mich. Professor of Roentgenology, University of Michigan.
Subject, "History of American Roentgenology."
- 3:30 p. m. A. W. Crane, M. D., Kalamazoo, Mich.
Subject, "Influence of Roentgenology on Internal Medicine."
- 4:00 p. m. James T. Case, M. D., Battle Creek, Mich. Department of Surgery, Battle Creek Sanitarium.
Subject, "Influence of Roentgenology on the Practice of Surgery."

ANNUAL CONFERENCE OF COUNTY MEDICAL SOCIETY SECRETARIES OF THE MICHIGAN STATE MEDICAL SOCIETY

To be held in
Detroit, May 14, 1928

Crystal Ball Room, Book-Cadillac Hotel

- 2:00 p. m. President's Remarks.—H. E. Randall, President, Presiding.
2:15 p. m. Organizational Activities.—F. C. Warnshuis, Secretary.
2:45 p. m. Society Scientific Work.
Post-Graduate Conferences and Clinics.—J. D. Bruce, Ann Arbor.
3:15 p. m. Attendance—"Are You Coming to the County Meeting?"
—R. G. B. Marsh, Tecumseh.
3:45 p. m. Securing Community Support.—Charles A. Neafie, Pontiac.
4:15 p. m. Round Table and Questions.—Conducted by the State Secretary.
5:00 p. m. Recess.
6:30 p. m. Dinner—(Crystal Ball Room).
7:30 p. m. Legislative Activities in New York State, "How It Was Done."
—W. H. Ross, M. D., New York City.
8:15 p. m. Michigan's Legislative Programs.
—Guy L. Kiefer, Chairman Legislative Committee.

Class reunions of Detroit College of Medicine and Surgery.

1872	1893	1913
1878	1898	1918
1883	1903	1923
1888	1908	1928

Those wishing to attend class reunion are urged to communicate with their class secretary as early as possible.

* The Trustees and Executive and Medical Staffs of Harper Hospital cordially invite the local and visiting physicians to inspect the new surgical wing and the new Roentgen Laboratory.

SECOND DAY

WAYNE COUNTY MEDICAL SOCIETY

G. Van Amber Brown, M. D., President of the Wayne County Medical Society Presiding.

May 15, 1928

Auditorium Maccabee's Building

- 8:00 a. m. Richard R. Smith, M. D., Grand Rapids, Mich.
Subject,
8:25 a. m. Miles F. Porter, M. D., Fort Wayne, Ind. Professor of Surgery, Indiana University Medical School.
Subject, "Hernia."
8:50 a. m. L. H. Newburgh, M. D., Professor Clinical Investigation, University of Michigan Medical School, Ann Arbor, Mich.
Subject, "Obesity," Analysis of the weight curve caused by under nutrition.
9:15 a. m. E. P. Sloan, M. D., Sloan Clinic, Bloomington, Ill.
Subject, "Two Kinds of Toxic Adenoma," with remarks on our diagnosis and treatment.
9:40 a. m. Geo. W. Crile, M. D., Professor Emer. of Surgery, Western Reserve University School of Medicine, Cleveland, Ohio.
Subject, "Factors Which Control the End-Results of Operations on the Gall Bladder and Thyroid Gland."

- 10:05 a. m. Ross McPherson, M. D., Professor Obstetrics and Gynecology, New York Polyclinic Medical School.
Subject,
- 10:30 a. m. Gordon K. Dickinson, M. D., Jersey City, N. J.
Subject, "Insults in Surgery."
- 10:50 a. m. A. B. Macallum, M. D. Professor Bio. Chem., University of Western Ontario.
Subject, "The Recent Advances in Knowledge of the Fat Soluble Vitamines."
- 11:15 a. m. M. Pierce Rucker, M. D. Associate Professor Obstetrics, Medical College Virginia.
Subject, "The Use of Lipiodol in the Early Diagnosis of Pregnancy."
- 11:40 a. m. James E. King, M. D., Professor of Gynecology, University of Buffalo Medical School.
Subject, "A Discussion of the Pathology of the Appendix."
- 12:00 m. to 12:25 p. m. Dr. Walter R. Campbell, Toronto, Ont.—Subject, "The Pre-Operative and Post-Operative Treatment of the Goitre Patient."
- 1:35 p. m. Foster S. Kellogg, M. D., Boston, Mass.—"High Forceps."
- 2:00 p. m. Millard F. Arbuckle, M. D., Assistant Professor Clinical Oto-Laryngology, Washington University School of Medicine, St. Louis, Mo.
Subject, "Infected Sinuses."
- 2:25 p. m. Wm. E. Lower, M. D., Associate Professor of Genito-Urinary Surgery, Western Reserve University School of Medicine.
Subject, "Surgery of Ureter."
- 2:50 p. m. Henry D. Furniss, M. D., Professor Gynecology, Columbia University, New York City.
Subject, "Post-Operative Renal Infection."
- 3:15 p. m. Halsey J. Bagg, Ph. D. Memorial Hospital, New York, N. Y.
Subject, "X-Ray and the Alteration of the Germplasm."
- 3:55 p. m. F. B. Granger, M. D., Boston Mass.
Subject, "The Present Status of Physical Therapy."
- 4:25 p. m. Edward Speidel, M. D., Clinical Professor of Obstetrics, University Louisville School of Medicine, Louisville, Ky.
Subject, "Obstetrical Emergencies in the Home."
- 4:50 p. m. Robert D. Mussey, M. D. Obstetrical Section, Mayo Clinic, Rochester, Minn.
Subject, "Nephritis in Relation to the Toxemias of Pregnancy."
- 5:15 to Thos. B. Noble, M. D., Indianapolis, Ind.
- 5:40 p. m. Subject, "Gastric or Duodenal Ulcer."

EVENING SESSION

- 7:30 p. m. Harold A. Miller, M. D., Professor of Obstetrics, University of Pittsburgh School of Medicine, Pittsburgh, Pa.
D. B. Martinez, M. D., Pittsburgh, Pa.
Subject, "Liver Extract in the Late Toxemias of Pregnancy."
- 8:20 p. m. James D. Bruce, M. D., Ann Arbor, Mich. Director of Department of Post-Graduate Medicine, University of Michigan.
Subject, "The Responsibility of the Practising Physician in Medical Education."
- 8:30 p. m. Chester W. Waggoner, M. D., Toledo, Ohio.
Subject, "The Doctor's Duty to His Colleagues and the Public."
- 8:55 p. m. G. K. Dickinson, M. D., Jersey City, N. J.
Subject, "The Education of the Physician."
- 9:05 p. m. Wm. M. Donald, M. D., Detroit, Mich.
Subject, "Presentation of prize to winner for best essay for the year, in the Noonday Study Club."
- 9:15 p. m. G. Van Amber Brown, M. D., President Wayne County Medical Society, Detroit, Mich.
"Retiring Address."
- 9:35 p. m. Announcing results of the election.
Introduction of new officers.

THIRD DAY

ALUMNI ASSOCIATION DETROIT COLLEGE OF
MEDICINE AND SURGERY

W. P. Woodward, President Alumni, Presiding.

May 16, 1928

Auditorium of the College

- 7:35 a. m. Richard McKean, M. D., Detroit, Mich.
Subject.
- 8:00 a. m. Alexander W. Blain, M. D., Professor of Surgery, Detroit College of
Medicine and Surgery, Detroit, Mich.
Subject, "Direct Blood Transfusion."
- 8:20 a. m. Ralph A. Kinsella, M. D., Professor of Medicine, St. Louis University
School of Medicine, St. Louis, Mo.
Subject, "Pathogenesis of Rheumatism."
- 8:40 a. m. Guy L. Kiefer, M. D., Commissioner of Health, Lansing, Mich.
Subject, "Advances in Public Health Work."
- 9:00 a. m. James E. Davis, M. D. Professor of Pathology, Detroit College of Medi-
cine and Surgery, Detroit, Mich.
Subject, "The Five Most Important Gross Pathological Tissue Changes."
- 9:20 a. m. Chas. S. McVicar, M. D. Mayo Clinic, Rochester, Minn.
Subject, "Intestinal Obstruction and Ileus Observations on the Nature and
Treatment of Associated Toxemia."
- 10:20 a. m. Chas. P. Emerson, M. D., Indianapolis, Ind. Dean, Indiana University
School of Medicine.
Clinic, Medical.
- 11:05 a. m. Alexander M. Campbell, M. D., (Consulting Surgeon and Obstetrician),
to Blodgett Memorial Hospital, Grand Rapids, Mich.
- 11:30 a. m. Subject, "Some Problems in the Management of Female Sterility."
- 11:30 a. m. Cyrus C. Sturgis, M. D. Director of the Simpson Memorial Institute,
to 12:30 Ann Arbor (University of Michigan), Ann Arbor, Mich.
Subject, "Pernicious Anemia and Other Forms of Blood Disease."
- 1:30 p. m. John Alexander, M. D., Assistant Professor of Surgery, University of
Michigan, Ann Arbor, Mich.
Subject, "Pulmonary Tuberculosis." (Illustrated).
- 2:00 p. m. John T. Watkins, M. D. Associate Professor Medicine, Detroit College
Medicine and Surgery, Detroit, Mich.
R. E. Cumming, M. D., Instructor, Detroit College Medicine and Surgery,
Detroit, Mich.
Subject, "Significance of Uretral Stricture in Relation to Abdominal and
Other Symptoms." (Illustrated).
- 2:50 p. m. C. F. McClintic, M. D. Professor of Anatomy, Histology and Embryology,
Detroit College of Medicine and Surgery, Detroit, Mich.
Subject, "Neural Surgery of the Vegetative Nervous System."
- 3:10 p. m. L. M. Warfield, M. D., Milwaukee, Wis.
Subject, "Hypothyroidism."
- 3:35 p. m. C. C. Birkely, M. D. Roentgenologist, Detroit, Mich.
Subject, "Difficulties in the Roentgen Diagnosis of Pulmonary Tuberculosis
in Children."
- 4:00 p. m. Roy B. Canfield, M. D., Professor Oto-Laryngology, University of Michi-
gan Medical School, Ann Arbor, Mich.
Subject, "Clinical Importance of Sinus Infections."
- 4:30 p. m. Wm. T. Coughlin, M. D., St. Louis, Mo. Professor of Surgery and Di-
rector of Department, St. Louis University School of Medicine.
Subject, "The Modern Treatment of Trigeminal Neuralgia Major and Its
Cure Under Local Anesthesia."
- 4:55 p. m. Stanley W. Insley, M. D., Detroit, Mich.
Subject, "The Short Interval Method in the Treatment of Hay Fever."
- 5:10 to Kellogg Speed, M. D., Associate Professor of Surgery, Rush Medical
5:50 p. m. College, University of Chicago, Ill.
Subject, "Unhappy Results Following Fractures."

EVENING SESSION

- 7:30 p. m. G. Clark Mosher, M. D., Kansas City, Mo. Attending Obstetrician Kansas City General and Trinity Lutheran Hospitals.
Subject, "The Menace of Abortion."
- 7:55 p. m. B. R. Corbus, M. D., Grand Rapids, Mich.
Subject, "Argument for the Medical Treatment of Peptic Ulcer."
- 8:15 p. m. W. H. Marshall, M. D., Flint, Mich.
Subject, "The Diagnostic Significance of Cardiac Pain."
- 9:00 p. m. Smoker. Alumni, Detroit College of Medicine and Surgery at auditorium of the college. John B. Deaver, M. D., speaker of the evening. Visiting physicians are invited to attend.

FOURTH DAY

May 17, 1928

Amphitheatre at Harper Hospital

- 8:00 a. m. Andre Crotti, M. D., Columbus, Ohio. Prof. Clin. Surg. Ohio State University.
Goitre Clinic.
- 10:00 a. m. Channing W. Barrett, M. D., Chicago, Ill. Professor of Gynecology, University of Illinois Medical School.
Gynecologic Clinic.
- 11:00 a. m. Carl A. Hedblom, M. D., Chicago, Ill. Professor of Surgery, University of Illinois College of Medicine.
Clinic, "The Surgical Treatment of Pulmonary Tuberculosis."
- 2:00 p. m. A. M. Mendenhall, M. D., Indianapolis, Ind. Professor and Head of Department of Obstetrics Indiana University School of Medicine.
Dry Clinic or Obstetric operative procedure.
- 3:00 p. m. John A. Oille, M. D., Toronto, Ont. Assistant Professor, University of Toronto Faculty of Medicine.
Medical Clinic.
- 4:00 p. m. John B. Deaver, M. D., Philadelphia, Pa. Emeritus Professor of Surgery, University of Pennsylvania School of Medicine.
Surgical Clinic.

INFORMATION

REGISTRATION: Those attending will please register at the Headquarters of the Wayne County Medical Society, 11th floor, Maccabee Building. A registration fee of \$5.00 will be charged all those not presenting a Membership Card of the Michigan State Medical Society or the Alumni Association Detroit College of Medicine and Surgery. Members may register at Harper Hospital and Detroit College of Medicine and Surgery.

HOTELS: Detroit has ample hotel accommodations.

MEETING PLACES: These are designated in the program of each day.

MAIL AND TELEGRAMS: These may be sent care of the Wayne County Medical Society, 11th Floor, Maccabee Building.

LADIES: Entertainment will be provided for the ladies by the Woman's Auxilliary of the Wayne County Medical Society. The Detroit Woman's Club extends the hospitality of their club to visiting ladies.

CLUB ROOM: The Club Rooms of the Wayne County Medical Society are open to all. Luncheon Rooms and Rest Rooms are at your service.

COUNTY SECRETARIES' DINNER will be limited to County Secretaries and Officers. Visitors are welcome to the After Dinner Addresses.

STATE REGULATION OF MEDICAL PRACTICE: A SUMMARIZATION OF LAWS AND OPINIONS

MICHIGAN STATE MEDICAL SOCIETY'S LEGISLATIVE COMMISSION

Guy L. Kiefer, Chairman; J. B. Jackson, J. E. McIntyre, John Sundwall, C. F. McClintic, W. H. Marshall, F. C. Warnshuis, Secretary.

Submission—The Legislative Commission of the Michigan State Medical Society was created by its House of Delegates in adopting the following resolution:

"In view of past experiences and by reason of sentiment encountered your Council now declares that the time has come when definite plans and policies must be determined upon for the purpose of conducting an educational campaign for the enlightenment of the public and the profession. That following such a campaign a bill be introduced in the next legislature that will create a revision of the law, the establishment of a Board that shall govern all who hold forth as being capable to treating the sick and to provide enforcement procedures. Such a campaign is imperative. To that end does the Council recommend that you authorize appointment by the President, confirmed by the Council, of a Special Legislative Commission, of five members, directed by the Secretary and advised by the Executive Committee of the Council. That this Legislative Commission be charged to conduct such an educational campaign, and prepare a suitable bill for introduction in the Legislature and that the Council be authorized to appropriate the requisite funds."

COMMITTEE ACTIVITY

Upon organization the general problem confronting this Commission was considered. It was deemed highly advisable that the Commission should have at its disposal informative information relative to the laws and legislative activity in all the states of the Union.

To obtain that information the appended questionnaire was sent to the Secretaries of the State Registration Boards and Medical Societies. A partial tabulation of the replies and comments are herewith imparted for the information and study of all who may be interested.

The Commission is now endeavoring to write a new Medical Practice Act. When such a new act is finally approved it will be imparted to our members.

MICHIGAN STATE MEDICAL SOCIETY QUESTIONNAIRE

(Please answer and return in enclosed addressed envelope to F. C. Warnshuis, M. D., Secretary, 1508 Grand Rapids National Bank Building, Grand Rapids, Michigan. The information obtained from all the states will be made available to you.)

1. When was your present medical practice law enacted?.....

2. When was it amended, if at all?.....
3. State briefly the nature of any amendments.
.....
4. Are the cults represented by membership on your Board of Registration?.....
(b) What cults?.....
5. If not represented, do they have independent boards?
(b) How many boards and what cults?.....
6. Do you consider your present Practice Act satisfactory?.....
7. What are the criticisms?.....
8. Has your Board or State Medical Society taken any action or is action contemplated to revise your law?.....
(b) If so, what?.....
9. Give approximate number of irregulars practicing in your State:
Osteopaths
Chiropractors
All other cults
10. Has your Legislature enacted a Basic Science Law?
If so, when?.....
If not, is such a law contemplated?.....
11. Can Osteopaths and Chiropractors sign death certificates?
12. Can they obtain Harrison Narcotic permits to prescribe opium and its derivatives?.....
13. Are their number increasing or diminishing in your state?.....
14. Are they permitted to practice in hospitals?
15. Do you have annual registration of doctors?
16. What, in your opinion, are the essentials that should be incorporated in an effective Medical Practice Law?.....

SUMMARY

The value of the replies to some of the questions was considerably lessened by the fact that those from the same state were directly contradictory. In these cases the states were omitted from the final tabulation.

There seemed to be confusion as to the scope of the term "cults". In tabulating, it was taken to include osteopaths, chiropractors, naturopaths and drugless healers, and not eclectics, homeopaths, chiroprodists nor optometrists.

Answers to the question as to whether

the cults were increasing or diminishing were so very contradictory and so frequently a matter of obviously personal opinion that no tabulation was made.

In 30 states the cults had no representation on the Board of Registration in Medicine. Of these states, 26 had independent boards for osteopaths, 24 had boards for chiropractors, 2 had boards for homeopaths, 1 for naturopaths, and 1 for eclectics. Four states, Alabama, Mississippi, Ohio and South Carolina, reported no cult representation and no independent boards.

In the 12 states reporting cult membership on the Board, osteopaths only were represented in 8 states, both osteopaths and chiropractors in 3 states, and chiropractors only in 1 state.

Twelve states did not recognize chiropractors in any way.

Twenty-one states reported Medical Practice laws satisfactory. Seven of these, however, contemplated revision, and only 13 reported no change planned.

Nineteen states judged their laws unsatisfactory. Of these, 14 contemplated revision, and 4 reported no action planned. Revisions were largely along the lines of a basic science law or annual registration of physicians.

Basic Science laws have been enacted in 5 states, Connecticut (1925) Minnesota (1927), Nebraska (1927), Washington (1927), and Wisconsin (1925). Thirty-seven states reported no such law.

In 14 states such a law is contemplated, and in 19 it is not. Three states did not answer, and in one the replies were directly contradictory.

Georgia attempted to pass such a law in 1927, but it was defeated, and Kansas had the same experience in 1927.

New Mexico does not favor a basic science law in a state with a small population.

Indiana—"No need of such a law with a single medical board."

Arizona—"We tried for a basic science law. It was not even voted on. In retaliation the legislature deprived the medical board of funds, so that it could not function. Better know your public. Never again!"

Washington—"As president of the Public Health League last year, my main object was to pass the basic science law covering the qualifications of any applicant who wished to practice the healing art in our state. It has practically cured the cult evil for the present in our state, as they

know they are too ignorant to pass any sort of basic science examination and therefore do not apply. Of those who have applied, two have received passing grades."

Texas—"Our legislature has never considered the so-called basic science law. We think that the present law goes a basic science law one better. We do not agree that a board of laymen should be allowed to say who shall enter a medical college, or who shall take an examination for the practice of medicine, under any circumstances. We are content to say that applicant for license to practice medicine in this state shall have attended a reputable college for two years, a reputable and recognized medical school for four years, and who has served an internship in a recognized general hospital. It would be hard to get around that. Then we say that the state has no right to tell a doctor what sort of medicine he shall practice or how he shall practice it. The state can only ascertain whether or not the applicant is sufficiently well informed in the fundamental subjects involved in preparation for the practice of medicine, and not involving the method of practice. If the state should say that this, that, or the other system of practice is the proper one, it would not mean anything. The state does not know. Neither can the state enforce a law which would require a doctor to follow any particular system. Therefore, it can only go back to the fundamental principles about which educated people do not differ. They are as follows: Anatomy, physiology, chemistry, histology, pathology, bacteriology, diagnosis, surgery, obstetrics, gynecology, hygiene, and medical jurisprudence."

Death certificates can be signed by osteopaths in 33 states, by chiropractors in 24 states, and by neither osteopaths nor chiropractors in 8 states.

In 22 states osteopaths can obtain Harrison Narcotic permits to prescribe opium and its derivatives, in 3 states chiropractors can obtain such permits, and in 20 states such permits are granted to neither osteopaths nor chiropractors.

In 8 states osteopaths were permitted to practice in hospitals, and in 3 of these chiropractors were admitted also. In 33 states neither osteopaths nor chiropractors were given this privilege.

Thirteen states have annual registration of physicians while 28 have no such provision. In 9 states the passage of such a law is contemplated.

ARE THE CULTS REPRESENTED ON YOUR BOARD OF REGISTRATION?

No	Yes	Which?	Independent Boards
Alabama			No
	Arizona	Osteopaths	Chiropractors
Arkansas			Eclectics, Homeos, Osteopaths
California			Osteopaths and Chiropractors
	Colorado	Osteopaths	No
Connecticut			Osteopaths, Chiropractors and Naturopaths
	Delaware	Osteopaths	Homeopaths
Georgia			Osteopaths and Chiropractors
Idaho			Osteopaths and Chiropractors
	Illinois	Osteopaths and Chiropractors	No
	Indiana	Osteopaths and "Drugless healers"	No
Iowa			Osteopaths and Chiropractors
Kansas			Osteopaths and Chiropractors
Louisiana			Osteopaths
Maine			Osteopaths and Chiropractors
Maryland			Osteopaths, Homeopaths, and Chiropractors
Minnesota			Osteopaths and Chiropractors
Mississippi			No
Missouri			Osteopaths and Chiropractors
Montana			Osteopaths and Chiropractors
Nebraska			Osteopaths and Chiropractors
Nevada			Osteopaths and Chiropractors
New Hampshire			Chiropractors
	New Jersey	Osteopaths and Chiropractors	No
New Mexico			Osteopaths and Chiropractors
	New York	Osteopaths	No
N. Carolina			Osteopaths and Chiropractors
North Dakota			Osteopaths and Chiropractors
Ohio			No
Oklahoma			Osteopaths and Chiropractors
	Oregon	Osteopaths	Chiropractors and Naturopaths
Pennsylvania			Osteopaths
Rhode Island			Osteopaths and Chiropractors
S. Carolina			No
South Dakota			Osteopaths and Chiropractors
	Texas	Osteopaths	None
Utah			Osteopaths and Chiropractors
Vermont			Osteopaths and Chiropractors
	Virginia	Osteopaths	No
Washington			Osteopaths, Chiropractors, and Drugless Physicians
	West Virginia	Chiropractors	Osteopaths
	Wisconsin	Osteopaths	Chiropractors

DO YOU CONSIDER YOUR PRESENT PRACTICE ACT SATISFACTORY?

Yes	No	Revision Contemplated
Alabama		No
	Arizona	Yes
Arkansas		Yes
California		No
	Colorado	Yes
Connecticut		No
	Delaware	No
	Idaho	No
Illinois		No
Indiana		Yes
	Kansas	Yes
Louisiana		No
	Maine	Yes
Maryland		No
Minnesota		No
Mississippi		No
	Missouri	Yes
	Montana	Yes
Nebraska		No
	Nevada	Yes
	New Hampshire	No
	New Jersey	Yes
New Mexico		No
New York		No
North Carolina		Yes
North Dakota		No
	Ohio	No
	Oklahoma	Yes
	Oregon	Yes
Pennsylvania		Yes
Rhode Island		No
South Carolina		?
	South Dakota	Yes
	Texas	Yes
	Utah	?
	Virginia	Yes
Vermont		No
Washington		Yes
	West Virginia	Yes
Wisconsin		Yes

HAS YOUR LEGISLATURE ENACTED A BASIC SCIENCE LAW?

Yes	No	Contemplated?
	Alabama	No
	Arizona	"Never again"
	Arkansas	Yes
	California	No
	Colorado	No
Connecticut	Delaware	No
	Georgia	Yes (Defeated June 1927)
	Idaho	Yes
	Illinois	No
	Indiana	No
	Iowa	?
	Kansas	Yes (Attempted 1927)
	Louisiana	No
	Maine	Yes
	Maryland	No
Minnesota	Mississippi	Yes
	Missouri	"Not soon"
	Montana	"Not at present"
Nebraska	Nevada	Yes
	New Hampshire	No
	New Jersey	"No"—"Yes"
	New Mexico	No
	New York	No
	North Carolina	No
	North Dakota	Yes
	Ohio	No
	Oklahoma	"In the nebulous future"
	Oregon	Yes
	Pennsylvania	Yes
	Rhode Island	No
	South Carolina	?
	South Dakota	Yes
	Texas	No
	Utah	Yes
	Virginia	?
	Vermont	"Not at present"
Washington	West Virginia	Yes
Wisconsin		

CAN OSTEOPATHS AND CHIROPRACTORS SIGN
DEATH CERTIFICATES?

Osteopaths	Chiropractors	Neither
Arizona	Arizona	Alabama
California	California	Arkansas
Colorado		
Connecticut		
Delaware		
Georgia	Georgia	
Idaho	Idaho	
Illinois	Illinois	
Indiana	Indiana	
Iowa	Iowa	
Kansas	Kansas	
Louisiana		
Minnesota		Maryland
Missouri	Missouri	Mississippi
Montana	Montana	
Nebraska	Nebraska	
New Hampshire	New Hampshire	Nevada
New Jersey	New Jersey	
New Mexico	New Mexico	
North Carolina	North Carolina	New York
North Dakota	North Dakota	
Ohio		
Oklahoma	Oklahoma	
Oregon	Oregon	
Pennsylvania		
Rhode Island		
South Dakota	South Dakota	South Carolina
Texas	Texas	
Utah	Utah	
Vermont	Vermont	
Virginia (limited)	Virginia (limited)	
Washington	Washington	West Virginia
Wisconsin		

CAN OSTEOPATHS AND CHIROPRACTORS OBTAIN
HARRISON NARCOTIC PERMITS TO PRESCRIBE
OPIUM AND ITS DERIVATIVES?

Osteopaths	Chiropractors	Neither
Arizona	Arizona	Alabama
California (limited)		Arkansas
Colorado		
Delaware		Connecticut
		Georgia
		Idaho
		Illinois
Indiana		
Iowa		
Kansas	Kansas	
Louisiana		
Minnesota (limited)		Maine
Missouri		Maryland
Nebraska		Mississippi
New Hampshire (limited)		Montana
		Nevada
		New Jersey
		New Mexico
		New York
		North Carolina
		North Dakota
Ohio (limited)		
Oklahoma (limited)		Oregon
Pennsylvania		
Phode Island		South Carolina
South Dakota		
Texas	Texas	
Utah		
Virginia (limited)		Vermont
Washington (limited)		
Wisconsin (limited)		West Virginia

ARE OSTEOPATHS AND CHIROPRACTORS PERMITTED
TO PRACTICE IN HOSPITALS?

Osteopaths	Chiropractors	Neither
		Alabama
		Arizona
		Arkansas
Colorado		Connecticut
		Delaware
		Georgia
		Idaho
Illinois (without drugs)	Illinois (without drugs)	Indiana
Iowa	Iowa	Kansas
		Louisiana
		Maine
		Maryland
		Minnesota
		Mississippi
		Missouri
		Montana
		Nebraska
		Nevada
		New Hampshire
		New Jersey
		New Mexico
		New York
		North Carolina
		North Dakota
		Ohio
		Oklahoma
		Oregon
		Pennsylvania
		Rhode Island
		South Carolina
		South Dakota
Texas		
Utah		
Virginia	Virginia	Vermont
West Virginia		Washington
Wisconsin		

DO YOU HAVE ANNUAL REGISTRATION OF DOCTORS?

Yes	No
Alabama	Arizona
	Arkansas
California	Colorado
Connecticut (\$2)	
Delaware	Georgia
Idaho (\$2)	Illinois
	Indiana
Iowa	Kansas
Louisiana	Maine
Minnesota	Maryland
	Mississippi
	Missouri
Nebraska	Montana
	Nevada
	New Hampshire
	New Jersey
	New Mexico
New York	North Carolina
	North Dakota
	Ohio
	Oklahoma
Oregon	
Pennsylvania	Rhode Island
	South Dakota
	Texas
Utah	Vermont
	Virginia
	Washington
	West Virginia
	Wisconsin

WHAT, IN YOUR OPINION, ARE THE ESSENTIALS
THAT SHOULD BE INCORPORATED IN AN
EFFECTIVE MEDICAL PRACTICE LAW?
ARIZONA

The basic science law will accomplish it. Another act is to stop all state board examinations and license only those who pass the national board. In 20 years that will clean things up. I have studied this question for 20 years. The public is not with organized medicine and is getting farther away every year. Under a vigorous campaign of education, this will change in time. Our own actions and practices have alienated the public. Reason: talk with any recent graduate, 95% have their minds on major operations at high figures and material success.

ARKANSAS

Uniform minimum standard of educational requirements for admission into medical schools. Rigid salutary rules in dealing with unethical procedures and practices; solicitation of patients, splitting fees, etc.

CALIFORNIA

See enclosed 1924 annual report, page 23. Should have a comprehensive group of subdivisions under which licensed individuals may be disciplined for unprofessional conduct, particularly narcotic derelictions.

COLORADO

Annual Registration. Elimination of inferior schools. Sufficient funds preferably by continued appropriation to enable boards to exercise suitable supervision and disciplinary power over its licentiates.

"—An ideal law should require all who practice the healing art to show basic science knowledge, adequate opportunity for elemental and scientific training, with a knowledge generally regarded necessary to recognize disease in its common forms. If the principle of cult license must be recognized, it should be definitely determined and limited in the law. One board should control all licensure. The administrative powers should be definite and as far as possible the decisions of the board should be final, limited only by a writ of certiorari which goes only to the question of the board's having given a full hearing or not. Each day's practice without a license should be designated a separate offense, and different methods of procedure should be authorized to meet emergencies and prevent procrastinations in trials.

DELAWARE

Basic Science Law. Single Board.
"—One Board instead of two."

GEORGIA

The new law passed in New York seems to us to be the best. We think the elimination of cults in our state can be brought about by passing the Basic Science law since this seems to be easier than passing a new medical practice act. The model Basic Science law was introduced in our legislature last year and passed the Senate and was recommended favorably by the Reference Committee in the House, but never reached the vote in the House because of the "jam" in the last few days of the session. We expect to pass it at the next session which meets in 1929.

IDAHO

(a) A good substantial court proof definition of the practice of medicine. This is very essential.

(b) From experience I would recommend incorporating in your new Medical Practice Act a

strong injunction clause. Idaho has such a clause in its dental law and it has proved a God-send to the profession. Having an injunction feature in your law enables you to stop persistent violators of the Medical Practice Act.

(c) Annual registration or renewal may be all right provided that the money is turned over to the Medical Examining Board. When Idaho's renewal law was passed it was turned over to the Board but the legislature, two years later, passed a law putting it into the general fund. This arrangement is an abomination.

ILLINOIS

Our attached law covers this question. In the main it is satisfactory.

"—The Medical Practice Act must first so feature the training of a student that he receives adequate instruction on all the sciences and angles leading up to the best known methods of complete diagnosis. His qualifications to do so should be tested by examiners who come from schools recognizing all necessary in diagnosis. He should then be allowed, with this knowledge, to follow such a course as will train him to thoroughly treat a human ailment when he has determined its nature, by such system as he feels will do the patient, in that particular ailment, the most good. The law should contemplate that schools recognized are careful in the selection of their staff, careful in the selection of a supervised internship before the issuance of a diploma, and careful in having adequate equipment. The Medical Practice Act should show the uninitiated public by penalty clauses that they are further seeking to protect the public against those who would commercialize human life by various questionable methods irrespective of the system, whether it be regular or irregular.

INDIANA

1. Single board for all schools of healing.
2. Single standard of pre-medical educational requirements for all schools of healers.
3. Right of the Board to specify what shall constitute a "reputable" school.
4. Injunction feature which makes the law enforceable.
5. Broad definition of the "practice of medicine." (See page 11 of enclosed booklet).

"—Annual registration. Revocation clause ala North Carolina. State appropriation. Full-time inspectors. Adequate compensation for Board members. Our's is \$6.00 per day. Basic Science law, of the non-retroactive type. That is, one who is now legally registered in Indiana, should be able to register in Michigan, via reciprocity, regardless of the Basic Science law."

IOWA

Have all practitioners of the healing art take examinations in all essential branches except materia medica (or pharmacology) and therapeutics—the latter being left to a special examining board or member of the examining board. I do not think that the Basic Science law is the best solution. I prefer the system in vogue in Kentucky and Alabama.

KANSAS

I think we have a good medical act in Kansas, but it only applies to the doctor of medicine. If we could succeed in having the law amended striking out the joker which permits the osteopath and the chiropractor to treat disease with medicine, I would be satisfied with it.

LOUISIANA

Our present act has proven effective thus far.

MAINE

Pre-educational requirements. If possible a composite board for all those practicing the healing art.

"—Give the rights and privileges to practice medicine and surgery to the qualified and keep these damned quacks and ignorant cultists where they belong. Don't recognize them in any way. Fight them first, last, and always."

MARYLAND

A law to contain provision for ascertaining that the applicant has received thorough training in medicine according to modern educational standards and that he is of good character. It should also contain provision for the revocation of any licenses when gross irregularities of conduct shall be exhibited.

MINNESOTA

Requirements for licensure. Grounds for revocation of license. Annual Registration. Enforcement of the law. Penalty.

MISSOURI

That there should be a Basic Science law and yearly registration.

MONTANA

Very similar to a Basic Science law, re-registration.

NEBRASKA

It would take too long and probably would be worthless for us to detail our ideas of medical practice law. Personally, we believe the ideal medical practice act would require one board and one only, and have it so constructed that all who desire to practice the healing art would be required to pass such a board for licensure. The general principles incorporated in the average Basic Science law.

NEVADA

Class A. school. Two years of pre-medical. One year's practice or one year internship.

NEW HAMPSHIRE

"Now you're talking." I find public opinion regulates "Medical Practice" whatever the law may be. You can only drive out the quack when public opinion is made to see "how raw he is." The county solicitors whose duty it is to enforce the law, are elected by the people, and if the people honestly or otherwise, want the quack, or see no harm in his treatments, the solicitor just doesn't function to drive him out. I believe in a Basic Science law, such a law pushes them all up to same *old* standard, then let the M. D.'s run their own *show*, and *ten to it*. Have the right men on the board and co-operate with the State Medical Society in order to have their interest.

NEW JERSEY

1. A composite board representing the various schools of practice. The New Jersey Board is made up of 5 graduates of the regular school, 3 homeopaths, 1 osteopath, 1 eclectic and 1 chiropractor. All candidates for license under any of these branches come before the same board.
2. Four years high school education for all candidates, and such extra pre-professional education as may be thought best for the medical men. Graduation from a school of practice giving a definite course. This school to meet the approval of the State Board of Medical Examiners. Give the Board power to rate the schools and to consider the school from which a candidate comes as being very

much more of a credential than what he actually does in the examination.

3. Examination provided in all of the so-called basic sciences to be given to all candidates. Special examination to be given to candidates from certain schools of practice in the subjects peculiar to their school of practice. Examination in these subjects to be given by the member of the Board representing that school. The examination in the basic sciences to be given to all candidates by the same member of the board, irrespective of what school of practice he comes from.
4. Strong enforcement clause. Power of enforcing the law should be in the hands of the Board, operating through the attorney general. It should not be left to the County prosecutors. These cases should be heard before a judge, eliminating a jury. The penalties should be made sufficient to more than cover the cost of prosecutions. In New Jersey the penalty is two hundred dollars for the first offense and five hundred dollars for the second, with a jail sentence as an alternative.

We, in New Jersey, feel that the New Jersey law, which has now come down since 1890, with amendments, is one of the strongest and best in the United States. We trust that this is a pardonable pride, and feel that any State contemplating changes in their medical practice acts, would do well to study the New Jersey statutes. We are enclosing herewith, a copy of the Medical Practice Act, or rather the sections covering the requirements and procedure for prosecutions, the osteopathic act and the act permitting the Board to issue limited licenses, Chapter 136, P. L. 1921, which takes care of the chiropractors and any other cult that may develop in the future.

The Board also administers the law in regard to the chiropodists and midwives, but as this class of licentiate is not under discussion at this time, we are not sending the laws governing same.

"—High standards of preliminary education. High standards of professional education. One State Board of Medical Examiners for all branches of the healing art. Provisions for reciprocity. Protection of the title 'Doctor' reserving it for practitioners in medicine only. A 'Grievance Committee' as in the New York law. Ample penalty clauses with specific provisions for imposing and collecting fines. No limited licenses." (These were forced upon us in 1915 to keep out separate boards for the cults, who are powerful in this state).

NEW MEXICO

We believe the copy of bill enclosed herewith contains all the essentials for New Mexico under present conditions. We regard a law providing for one board to license all who offer to treat the sick and afflicted with a working majority of regular physicians, and the rights of the minority so guarded that should the majority so desire, they could do no injustice to the minority. Such a law would soon eliminate the cults as under present conditions they do not enforce the provisions of their laws. With the enforcement of the educational provisions of their present law the chiropractors would soon be eliminated. We feel the injunction provision in our proposed law as an essential enforcement provision.

NORTH CAROLINA

1. A minimum legal requirement of two years standard preliminary college education.

2. At least four years medical education in a school having an approved course.
3. High moral standards as a requirement for admission to the examinations of the Board.
4. The fullest discretion on the part of the Board both as to admission to the examinations and the conduct of same.
5. Full discretion on the part of the Board as to the revocation of a license for misconduct, with detailed machinery set up, wherein a hearing may be had, witnesses summoned and oaths administered.
6. Full discretion on the part of the Board in the granting of license to experienced physicians coming from other states, and without written examinations.
7. Severe penalty for unlicensed practice, and the same section should contain a clear legal definition of what constitutes the practice of medicine.
8. Annual registration with the Board instead of the one permanent registration in the county where the physicians expect to practice.
9. Full responsibility for the enforcement of the law to be placed with the Board, to be executed by a whole-time officer.
10. Requirements that the Board shall establish and maintain an adequate system of records.

NORTH DAKOTA

1. Have the Medical Practice Act concise especially as to the definition of the Practice of Medicine.
2. The same entrance requirements for all who practice the healing art.
3. A good, clear Basic Science law (no compromise or quibbling in order to get one incorporated in your Act).

OHIO

An effective Medical Practice Act will provide for a single standard for those who are permitted to treat the sick. It should be administered by a medical board. I do not believe farming out any part of the examination to laymen will enhance its value. Too, it should provide for reciprocity or endorsement of credentials (choose your term) of an individual holding proper credentials and of good ethical practice and moral character with the least amount of annoyance and delay, though time should be taken for necessary investigation of each applicant. The enforcement section should receive careful study and should provide for speedy trial and adequate penalty.

"—(a) A 'single standard' for all those who treat the sick is probably the first desirable essential."

(b) A high grade professional medical board detached from other departments of government such as departments of public instruction, etc.

(c) Definition in the practice act so that violations are considered "general offenses" with duty imposed on local enforcement officials to prosecute offenders just as in the case of burglary, bootlegging, assault, etc. In other words, not to have the entire responsibility for enforcement placed on the medical board itself.

(d) Definitely high standards defined in the practice act which must be met by all those who treat the sick.

(e) As important as any for the right sort of professional personnel on the medical board, for the exact wording of laws are seldom as important as the character of the individuals en-

trusted with judicial, administrative, and enforcement powers.

OKLAHOMA

Those based on common sense—built up from past experience. I believe one of the stumbling blocks to sensible medical legislation lies in our own profession. Every proposed medical act, almost, is vulnerable, in that those who must pass it, the non-medical laity, are led to believe that it is biased and favors an entrenched medical profession to the injury of certain cults who, honestly or otherwise, think they have something worth while to offer.

OREGON

Osteopaths disappearing since 1911 when they came under M. D. Practice Act, taking examination in osteopathy instead of practice of medicine—if we had Basic Science and injunction, and same law to cover all cults and M. D's, we would be well satisfied.

PENNSYLVANIA

1. Equal requirements in preliminary and basic science medical studies, two years.
2. At least one year in diagnosis, pathology, bacteriology, dietetics, and preventive medicine, with thorough cult training, in the third year. Preferably, also, a similar course in a fourth year.
3. The school year should mean at least 32 weeks, of 35 hours each week.
4. Annual registration of all licensed of at least \$2.00, the money to be available for enforcement of the act.
5. Exact and practicable enforcement clause which will assure unhampered execution of the same.

RHODE ISLAND

I approve of the annual registration of physicians. I think, however, such an act would not meet with the approval of the medical profession in this state. I believe it is necessary to have a very definite and comprehensive definition of the practice of medicine. Otherwise it is difficult to prosecute offenders under the act. The Board of examiners should have the right to suspend temporarily the license of any practitioner for unprofessional conduct, drunkenness and other minor offenses. The time has come when reciprocity between states, the requirements of which are high, should be adopted. This and many other important matters will be seriously considered at the next meeting of the Federation of State Medical Examining Boards of the United States to be held in Chicago in February. As President of that Federation, I am deeply concerned in the general recommendation by that Federation of some of these important matters.

SOUTH DAKOTA

Basic Science law. Annual registration a "Composite Board for the Healing Art."

TEXAS

The essentials of the Medical Practice Act will be different in different states, according to their respective constitutions. When we have corrected our present medical practice act by a few additional amendments, I will consider that it embraces all of the essentials, so far as we are concerned, and I will feel that with minor changes the law would fit most of the other states. With due regard for the constitutional provisions of the state, the law should require that all persons engaged in the vocation of keeping people from getting sick, or attempting to cure them once they have become ill, should be required to first

have taken a reasonably broad general education and then to have familiarized themselves with the subjects commonly taught in the medical colleges, except these which have to do directly with the art of medicine, which the state should look upon as a matter of personal, rather than general concern. There must be provisions for enforcing the law once it is enacted, that will be effective, and it should be somebody's business to see that the law is enforced, with sufficient funds to enable them to do just that.

First—A minimum pre-medical qualification for all schools of practice—uniform.

Second—A minimum medical standard involving examination in the fundamentals—anatomy, physiology, pathology, hygiene, chemistry, bacteriology, histology, toxicology, obstetrics, gynecology, surgery, diagnosis.

Third—Equal privileges under the law to all who qualify under the standards adopted since "Limited License" is the greatest menace to the development of a qualified profession. State may limit its certificates but it can't limit the use of it.

VERMONT

The Basic Science Act seems to be a very fine idea. However, legislators have a very sympathetic attitude toward all so-called irregular forms of medical practice, and are inclined to look upon the Basic Science Act as a scheme on our part to shut the others out. If the Basic Science Act is acceptable to the public as represented in a typical state legislature, I believe we should have an Act guaranteeing a high standard of regular medical men and let the irregulars go their own way. If in the future they make good, we have no just grounds of opposition. If they do not make good, they will disappear of their own accord for lack of popular support.

"—Uniform requirements as to preliminary education and examination in fundamental subjects."

VIRGINIA

The Basic requirements as to list of fundamental branches studied should in the main essentials be the same for all, and the time of study the same and examination the same.

WASHINGTON

Chiefly a Basic Science law for all who would practice healing. It is unfair to the M. D., but do not think it can be passed unless it applies to all.

MONTHLY LETTER

Attention is drawn to the Secretary's Monthly Letter which County Secretaries are requested to read at their first regular meeting following its receipt. Please so aid in imparting that information to your members.

MEDICAL AND SURGICAL CLINICS— DETROIT, MAY 14-18th.

Please note the program published in this issue and the Editorial Comments thereon. Please give this Clinic every possible publicity among your members. It would seem that no member could afford to miss this opportunity that brings such an array of clinicians to their very door-

step. To attend is one of the benefits of membership.

REPORTS OF MEETINGS

Please forward for publication a report of every meeting that is held. It is very much desired that these reports be received before the 20th of the month so as to include them in the next issue.

A. M. A. MEETING,

Will be held in Minneapolis the week of June 11th. Our Society will be represented in the House of Delegates by: J. D. Brook, C. S. Gorsline, L. J. Hirschman, Carl Moll and A. W. Hornbogen. Members planning to attend the Scientific Sessions should apply early for their hotel reservations.

DUES

All members whose dues were not paid by April 15th have been placed on the suspended list, their names were removed from the mailing list and they are without medico-legal protection for professional services rendered during the period of suspension. County Secretaries are requested to make special effort to collect these back or unpaid dues.

SPEAKERS FOR COUNTY PROGRAMS

Organizations having difficulty in securing speakers will be given assistance from this office in solving their difficulties. We ask though, that you give us ample notice and not expect us to provide a speaker on a forty-eight hour notice. It takes us four to five days to write a letter to ascertain if a speaker is free to make engagements. However, command us for we will endeavor to accord every possible assistance.

MEMBERSHIP POCKET CARDS

These are being mailed to all members who have paid their 1928 dues. These cards are requisite for presentation at all Clinics and Conferences. The policy has been adopted that all Clinics and Conferences are free to all members in good standing, but that a Registration Fee will be charged to non-members and those who are in arrears in 1928 dues. We urge that you secure your pocket membership cards by prompt payment of your annual dues.

Dear Doctor:—

Enclosed you will find a pocket membership card. Keep it.

Our plans for 1928 include a series of Clinics

and Post-Graduate Conferences. They are being conducted for you and are one of the benefits of membership. They are free to you. This year, non-members attending these Clinics and Conferences will be assessed a Registration Fee. Presentation of your card entitles you to attend all these clinics without paying the Registration Fee.

Watch The Journal for announcement of these Clinics and Conferences. Plan to attend them. They are sponsored and provided by your State Medical Society. Your annual dues entitle you to participate.

Respectfully,
F. C. Warnshuis, Secretary.

LEGISLATIVE COMMISSION

Your Legislative Commission has had several sessions. It presents its first communication in this issue. Do not fail to read their report in this department. The Commission will have a very important recommendation which they will impart in the June issue. We urge that our members give thoughtful attention to this important activity. The Commission invites your co-operation and recommendations. Send to the Secretary your opinions and advice.

POST-GRADUATE CONFERENCE

The following is the program of the Manistee Post-Graduate Conference held on April 26th:

POST GRADUATE CONFERENCE—MANISTEE

Thursday, April 26, 1928.

- 10:20 a. m. Opening Statement.
—Councilor Ricker.
- 10:30 a. m. Treatment Diabetes.
—B. R. Corbus, M. D., Grand Rapids.
- 11:00 a. m. Points in Diagnosis of Acute Abdominal Conditions.
—F. C. Warnshuis, M. D., Grand Rapids.
- 11:30 a. m. Methods of Diagnosis of Gastro-Intestinal Disease with Demonstrations.
—E. G. Eggleston, M. D., Battle Creek.
- 12:15 p. m. Luncheon—Followed by Discussion; Organizational Achievement.
—State Secretary.
- 1:45 p. m. Prenatal Care—Moving Pictures.
—A. M. Campbell, M. D., Grand Rapids.
- 2:15 p. m. Post-Operative Problems following Cholecystectomy.
—E. G. Eggleston, M. D., Battle Creek.
- 2:45 p. m. Treatment of Fractures.
—F. C. Warnshuis, M. D., Grand Rapids.
- 3:15 p. m. Liver Feeding in Anemia.
—B. R. Corbus, M. D., Grand Rapids.
- 3:45 p. m. Problems in Gynecology.
—A. M. Campbell, M. D., Grand Rapids.

COUNTY SECRETARIES ANNUAL CONFERENCE

The following is the program for our Annual Conference of County Secretaries. It is the urgent desire of President Randall and the Council that every County

Secretary shall be present at this meeting. Much that is of vital importance to County Societies and their members will be imparted. It is further desired that you receive this information in person. Remember, your actual travel expenses will be paid. The opportunity is also yours to attend the Clinics that will be held that week and which are announced in this issue. Attendance is a duty that devolves upon you by reason of your office. Please permit nothing to prevent your being present.

ANNUAL CONFERENCE OF COUNTY MEDICAL SOCIETY SECRETARY OF THE MICHIGAN STATE MEDICAL SOCIETY

(To be held in Detroit, May 14, 1928)

Crystal Ball Room, Book-Cadillac Hotel.

Fast Time

- 2:00 p. m. President's Remarks.
—H. E. Randall, President, Presiding.
- 2:15 p. m. Organizational Activities.
F. C. Warnshuis, Secretary.
- 2:45 p. m. Society Scientific work.
Post-Graduate Conferences and Clinics.—J. D. Bruce, Ann Arbor.
- 3:15 p. m. Attendance—"Are You Coming to the County Meeting?"
—R. G. B. Marsh, Tecumseh.
- 3:45 p. m. Securing Community Support.
—Charles A. Neafie, Pontiac.
- 4:15 p. m. Round Table and Questions.
—Conducted by the State Secretary.
- 5:00 p. m. Recess.
- 6:30 p. m. Dinner—(Crystal Ball Room).
- 7:30 p. m. Legislative Activities in New York State, "How It Was Done."
—W. H. Ross, M. D., New York City.
- 8:15 p. m. Michigan's Legislative Programs.
—Guy L. Kiefer, Chairman
Legislative Committee

CONGRESS AND DOCTOR'S INCOME TAX

One doctor, by reason of independent indiscretion, raised a question with the Income Division of the Treasury. An adverse ruling was made. As a result doctors have been denied the right to deduct certain professional expense in their income returns. For some four years the A. M. A. has sought to secure the rescinding of that ruling and being unable to do so a repealing bill was introduced.

IN THE SENATE OF THE UNITED STATES

February 1, 1928

Referred to the Committee on Finance and ordered to be printed.

AMENDMENT

Intended to be proposed by Mr. Robinson of Indiana (H. R. 1) to reduce and equalize taxation, provide revenue, and for other purposes, viz:

On page 19, line 4, insert the following after the word "business": "or in attending meetings

of trades or business organizations of which the taxpayer is a member:"

This bill is now in the Committee. We wrote to our two senators and all the Michigan Congressmen:

March 21, 1928.

Hon. James Couzens,
United States Senator,
Washington, D. C.

Dear Senator Couzens:—

In behalf of some four thousand members of the Medical Profession of Michigan, I am calling to your attention the proposed bill that is pending, known as the Robinson Amendment to the pending Revenue Reduction Bill H. R. 1, that authorizes physicians to deduct from their federal income tax traveling expenses incurred in attending meetings of medical organizations.

We would urge that you accord to this measure your influence and support to obtain its adoption. To substantiate such action, I am enclosing a brief that clearly sets forth the discrimination that is being made against the profession of medicine.

I am quite sure that you will readily perceive the justice of this plea and assume an active part in behalf of the four thousand doctors of Michigan to secure this amendment to the present income tax law.

Yours very truly,
F. C. Warnshuis, Secretary.

The following replies have been received:

March 23, 1928.

Dear Dr. Warnshuis:—

I have your letter of the 21st written in behalf of the Michigan Medical Profession concerning the Robinson Amendment to the pending Revenue Bill, H. R. 1.

I can assure you that I am in sympathy with the amendment. I believe that doctors ought to have the same opportunity of deducting their expenses as any other group.

I will be glad to do what I can to aid in this direction.

Sincerely yours,
James Couzens.

April 11, 1928.

My dear Fred:—

This will reply to your letter of April 9. First let me thank you for your generous compliments. I hope ultimately in some small degree to justify your faith. Secondly let me hasten to say to you that I entirely agree with the medical profession's viewpoint regarding the so-called Robinson Amendment to the Revenue Act. It spells obvious justice. I shall be very happy to be helpful in this matter in any possible way.

With warm personal regards and best wishes.

Cordially and faithfully yours,
A. H. Vandenberg.

April 13, 1928.

Dear Dr. Warnshuis:—

Receipt is acknowledged of your letter of April 11, 1928, and enclosures. I note that your organization is in favor of the Robinson Amendment to the pending Revenue Bill, permitting physicians to deduct from their federal income taxes necessary expenses incurred in attending meetings of medical organizations.

This is not a new matter, and I am entirely familiar with the situation, and it has always seemed to me that legitimate expenses incurred by physicians in attending clinics, etc., the purpose of which is to better fit them to carry on their work, should be deductible in the income tax returns.

I am glad to have your letter and am placing it in the files to have before me when this matter comes up in the House.

Very truly yours,
Earl C. Michener.

April 13, 1928.

Dear Dr. Warnshuis:—

In reply to your letter of April 11, concerning the Robinson Amendment to H. R. 1, I am quite convinced of the justice of your request and if I have the opportunity to do so I will vote for the exemption mentioned.

Sincerely yours,
Joseph L. Hooper.

April 14, 1928.

My dear Doctor:—

I have the pleasure to acknowledge the receipt of your letter of April 12, relative to the Robinson Amendment to H. R. 1.

You may be sure the Medical Profession of Michigan can count on my 100 per cent co-operation with regard to the above mentioned amendment.

Very cordially yours,
Clarence J. McLeod,
Member of Congress.

April 14, 1928.

Dear Doctor:—

Your letter of April 12 received with enclosures. I certainly will give this my earnest attention.

With kindest personal regards, I am
Sincerely yours,
Frank P. Bohn.

April 14, 1928.

Dear Dr. Warnshuis:—

This will acknowledge the receipt of your letter of the 12th instant relative to the Robinson Amendment to the revenue bill.

Of course this bill is now pending in the Senate and I cannot act upon the amendment in the House of Representatives unless it is adopted by the Senate. However, I am glad to have your views in regard to it and I hope that something satisfactory will be worked out along the line of the suggested amendment.

Very sincerely yours,
Carl E. Mapes.

April 14, 1928.

My dear Warnshuis:—

I beg to acknowledge receipt of your favor of April 12th calling to my attention legislation appertaining to the Revenue Amendment to the Federal Income Tax. I assure you that same shall have my earnest consideration. It has never been called to my attention before and therefore I am sure it has not had much discussion, if any, outside of the Committee.

As I state above, I shall be glad to relieve the provision of any injustice that is now being given it.

Yours sincerely,
Grant M. Hudson.

April 16, 1928.

My dear Doctor:

I have your letter of recent date in regard to the Robinson amendment to H. R. 1. I have made inquiry about this amendment and find that while there is some opposition to it, Senator Robinson is hopeful of getting it through. You may be assured that when this bill is called up for consideration I will be glad to bear your suggestions in mind.

With best wishes, I am

Very sincerely yours,

R. H. Clancy.

April 17, 1928.

Dear Doctor:—

I have yours of the 12th, relative to the Robinson Amendment to the Revenue Bill which is pending in the Senate, and am glad to hear from you. The Revenue Bill passed the House some months ago, as you know, and if the Robinson Amendment is adopted in the Senate, it is up to the House and Senate Conferees to say what will finally be done with this item, so it is not likely that the House will have an opportunity to do anything about it, except of course those members who are appointed conferees on the Revenue Bill, and these men will be members of the Ways and Means Committee. Personally, I should be glad to see this amendment written into the law.

With kindest regards, I am

Sincerely yours,

Roy O. Woodruff.

April 14, 1928.

My dear Doctor:—

I am in receipt of your letter enclosing a copy of the Robinson Amendment to H. R. 1, providing that physicians be allowed to deduct from their Federal Income Tax the expense incurred in attending meetings of Medical Organizations and requesting me to support the same.

In reply I would say that I would be glad to do so if given an opportunity but the Bill has already passed the House and an opportunity to vote upon the amendment in the House will depend entirely upon the action in the Senate. If it is not included by that body no possible action can be taken by the House.

I have read the brief you submit in behalf of the amendment and it seems reasonable on its merits in view of the statement made that similar deductions are allowed in other cases. Should the amendment be included in the Senate its adoption by the House will depend upon the action of the Conferees. The House usually follows the action taken by the Conferees in such matters.

Yours very truly,

John C. Ketcham.

The above evidences once more another of the hundred and one activities of your parent national and state medical organizations that are directed and carried on in furthering the interests of the individual member. We hope to be able to advise you that this amendment was enacted during the present session of Congress.

WHAT A SECRETARY CAN DO

The following is an attention-arresting, interesting form of sending out notices of meetings. It is from the Oakland County Society:

A meeting of the Society will be held at 6:30 p. m., Thursday evening, April 19th, at the Merchants' Restaurant, 406 Main street, Rochester. Dinner will be served.

Dr. G. C. Burr, Detroit, will present a paper on "Tuberculosis of the Kidney." The paper will be illustrated with slides and motion pictures.

The Rochester committee on arrangements are planning to present several musical numbers for the entertainment of the Society.

* * *

At the last meeting the following physicians were elected to membership:

Dr. Ethan B. Cudney, Pontiac, George Washington Medical School, 1922.

Dr. H. E. Boice, Farmington, Jefferson Medical College, 1899.

* * *

The following applications for membership have been received and referred to the Board of Directors:

Dr. E. J. Linsday, Walled Lake, Detroit College of Medicine and Surgery, 1926.

Dr. John S. Lambie, Birmingham, Jefferson Medical College, 1906.

Dr. Wm. Lloyd Kemp, Birmingham, University of Michigan, 1922.

* * *

AN EXCERPT FROM THE PRINCIPALS OF MEDICAL ETHICS—DISCUSSIONS IN CONSULTATION

Article 2, Sec. 5.—After the physicians called in consultation have completed their investigations of the case, they should meet by themselves to discuss conditions and determine the course to be followed in the treatment of the patient. No statement or discussion of the case should take place before the patient or friends, except in the presence of all the physicians attending or by their common consent; and no opinions or prognostications should be delivered as a result of the deliberations of the consultants, which have not been concurred in by the consultants at their conference.

* * *

The President of the Society has appointed the following members to act on the Medical Advisory Board of the Oakland County Department of Health:

Doctors B. M. Mitchell, R. H. Baker, L. A. Farnham, Pontiac; J. H. Gordon, Birmingham, and J. S. Morrison, Royal Oak.

* * *

A four day medical and surgical clinic will be held in Detroit, May 14, 15, 16 and 17. The preliminary announcement appears in the April issue of The Journal of the Michigan State Medical Society.

* * *

The next annual session of the American Medical Association will be held at Minneapolis, Minn., June 11-15, 1928. The Chicago Great Western Railroad offers a rate of \$36.71, Pontiac to Minneapolis and return. Tickets may be routed via Rochester, Minn. without additional cost.

C. A. Neafie, M. D., Secretary.

MINUTES OF THE EXECUTIVE COMMITTEE MEETING

The monthly meeting of the Executive Committee of the Council was held in Detroit on Wednesday, March 28th, 1928.

Present—Chairman Stone, President Randall, B. R. Corbus, J. D. Bruce, and Secretary Warnshuis.

1. The matter of election of alternate delegate to serve in the Secretary's place for the Minneapolis meeting of the American Medical Association was discussed and because of seniority, in point of time of election as alternate, Dr. A. W. Hornbogen was designated to so serve.

2. The Secretary reported having had a conference with a representative of the Wayne County Medical Society, and also managers of Detroit hotels. As the result of these conferences it was recommended that the week of September 23rd be designated as the date for the holding of our 1928 Annual Meeting.

The Secretary reported that in conference with the Detroit committee it was proposed to devote the days of Monday and Tuesday, September 24th and 25th, to hospital clinics; that the House of Delegates convene and transact its activities on Wednesday, September 26th; that the Section meetings and General Session be held on Thursday and Friday, September 27th and 28th, and that September 29th, Saturday, be again devoted to hospital clinics.

Upon motion duly made and supported the above dates were accepted and the tentative plans approved. The Secretary was authorized to use his own judgment in the matter of conducting commercial and scientific exhibits. The Secretary was also authorized to arrange for a combined public meeting in the Masonic Temple on Friday evening, September 28th.

3. The Secretary reported that in compliance with the motion made at the Annual Meeting in January, he had written to the President of the Medical Protective Company requesting a conference for the purpose of determining a more definite policy in the joint handling of medical defense cases. The President of the Medical Protective Company replied to this letter and a conference was arranged for and held on March 28th between him, Dr. F. B. Tibbals, Chairman of the Medical Legal Committee, and the Society's attorney, Mr. Barbour. As the result of the conference it is anticipated that a more definite policy of co-operation will be evidenced from now on.

4. The Secretary reported he had sent a questionnaire to the Secretaries of all the County Societies, ascertaining how and in what way the State Society could be of more service and assistance to our component units. The Secretary read a number of these replies and upon motion he was instructed to exercise his judgment as to complying with the results and suggestions contained in these letters from County Secretaries.

5. Upon motion duly made the Secretary was instructed to send to the Wayne County Medical Society the State Society's cordial invitation supporting the Wayne County Society in its invitation to the American Medical Association to hold its 1929 meeting in Detroit.

6. The Secretary drew attention, that the Council at its Annual Meeting had authorized the holding of a Secretaries' Conference and recommended that this conference be held on the first day of the clinic week that is to be conducted in Detroit on May 14th to 18th. On motion, the Secretary was authorized to call such Secretaries' Conference and to formulate the program for that meeting.

On further motion, duly made and supported, the Secretary was authorized to pay the actual railroad expense of County Secretaries attending this Secretaries' Conference.

7. Dr. Wollenberg, representing the Wayne County Medical Society, appeared before the Executive Committee imparting statements and figures revealing the value of the listing of the members of the Wayne County Medical Society in the telephone directory of Detroit. He presented the request of the Wayne County Medical Society, together with a communication from the Council of the Wayne County Medical Society, again requesting that the State Medical Society aid the Wayne County Medical Society in the defrayment of the expense of such listing and that an appropriation of \$1.50 per member be made by the State Society. After full discussion it was duly moved and supported that the request of the Wayne County Medical Society be concurred in and the Secretary authorized to draw a voucher to that amount in favor of the Wayne County Medical Society. Inasmuch as it was deemed desirable that each member of the Council be accorded an opportunity to vote upon the question, the Secretary was instructed to take a mail vote upon this action of the Executive Committee.

8. The Executive Committee devoted

considerable time discussing the plan of Post-Graduate Conferences, Post-Graduate Course of Instruction and also Clinical Weeks in different portions of the state. A tentative program of meetings was formulated and as soon as details connected therewith can be ascertained this program will be published in The Journal and announced to the County Organizations.

9. The Secretary presented a communication from Dr. C. B. Burr, Chairman of the Committee on History. The Secretary was instructed to advise Dr. Burr that he secure such stenographic assistance as may be required, and that when the time arrives for the consideration of publication and printing of the history that the matter be again taken up with the Council.

10. The Secretary reported that the Treasurer of the Society, Dr. John R. Rogers, would be absent for approximately three months on a European trip. Upon motion duly made and supported, Councilor Corbus was authorized to be custodian of the investment funds of the Society.

The Executive Committee adjourned at 4:30 p. m.

F. C. WARNSHUIS, Secretary.

WOMAN'S AUXILIARY

When the Woman's Auxiliary to the Michigan State Medical Society was organized in June, 1927, at Mackinac Island, it was done quite informally and after Mrs. Guy L. Kiefer was unanimously elected president, it was decided to allow Mrs. Kiefer to appoint her secretary, and then to carry on as best she could until the next annual meeting, when by-laws were to be passed upon and more general work planned for.

Thus far our work has been mostly organization. We have thirteen County Auxiliaries organized, with several more about to organize and become affiliated with the state organization.

We were fortunate in being able to collect dues from a few counties so that we might forward same to the secretary of the Woman's Auxiliary of the A. M. A. and thus secure recognition by the National Auxiliary and be eligible for registry at the meeting to be held in June at Minneapolis.

The various Auxiliaries have not decided on definite work to be taken up this first year, but it is hoped we will have a good representation at our state meeting in Detroit during the week of September

24, when plans will be made and, we believe, carried through for activities during the following year.

The Auxiliaries thus far organized, with officers, are as follows:

Battle Creek—Mrs. J. E. Rosenfeld.
 Bay City—Mrs. A. W. Herrick.
 Hastings—Mrs. Guy C. Keller.
 Hillsdale—Mrs. W. H. Sawyer.
 Ironwood—Mrs. E. B. Stebbins.
 Jackson—Mrs. E. S. Peterson.
 Kalamazoo—Mrs. B. J. Hubbell.
 Lansing—Mrs. Karl B. Brucker.
 Maple Rapids—Mrs. W. B. McWilliams.
 Morencie—Mrs. C. H. Westgate.
 Saginaw—Mrs. O. W. Lohr.
 Detroit—Mrs. Clarence Owen.
 Sault Ste. Marie—Mrs. F. C. Bandy.

We hope before the state meeting in September our list will be enlarged.

Preparations are under way for a very interesting time for the ladies at this meeting and we hope the annual meeting will be such a success this year that the County Auxiliaries will not let anything stand in the way of their attendance each year.

Wayne County has organized with a large membership and they have enjoyed some very interesting luncheon meetings. Wayne has a busy time ahead of her for September, and with a new organization it means much work.

Mrs. Guy L. Kiefer, the state president, was hostess to Ingham County Auxiliary at a tea at the Hotel Olds, at which time Dr. F. C. Warnshuis, Secretary of the Michigan State Medical Society, gave a talk on the aims and works that might be accomplished by the County Auxiliaries. We are hoping that other Auxiliaries may have the opportunity of hearing Dr. Warnshuis speak. He inspired a great deal of enthusiasm at the Lansing meeting.

Jackson women organized and entertained at a very delightful dinner, with Mrs. Kiefer as honor guest.

Mrs. J. E. McIntyre, Secretary.

GRATIOT-ISABELLA-CLARE COUNTY

The April meeting of the Gratiot-Isabella-Clare County was held in the Park House, St. Louis, Thursday, April 19. Twenty-two had supper together after which President W. E. Barstow called on Dr. F. C. Warnshuis, secretary of the State Society, who presented a three reel moving picture demonstration of infections of the hand. The first two reels took up the anatomy of the lymphatics, tendons, muscles, bursae, thenar, and hypothenar spaces, their relation to each other and showed how infection traveled from one to

the other; the last reel took up the treatment in detail.

These pictures proved to be a very practical way of presenting this subject. After this subject was completed, Dr. Warnshuis then talked for over an hour on the work of the State Society. Altogether it proved a very profitable meeting.

E. M. Highfield, Secretary.

MONROE COUNTY

Monroe County Medical Society met at the Park hotel, Monroe, March 15, 1928. Dinner was served at 6:30. Dr. Phil Marsh, Professional Building, Detroit, gave an excellent discussion of "The Treatment of Diabetes." An interesting discussion followed.

Florence Ames, M. D.

CHIPPEWA COUNTY

At the January meeting of the Chippewa County Medical Society, the following officers were elected:

President, Dr. T. R. Whitmarsh.

Vice-President, Dr. I. V. Yale.

Secretary, Dr. F. C. Bandy.

Delegate of the State Medical Meeting, Dr. F. H. Husband.

Alternate, Dr. G. A. Conrad.

F. C. Bandy, Secretary.

MUSKEGON COUNTY

On Friday evening, April 13, the members of the Muskegon County Medical Society met at the Century Club for dinner. Covers were laid for 28, Doctors Wood and Nichols of the Oceana County Society, being present as guests.

No business was brought before the meeting except a communication from the Muskegon County Tuberculosis Association requesting the County Medical Society to vote approval of and appoint members to give completed physical examinations to 200 members of County 4 H clubs on June 2. The Society voted that it would be impractical to attempt to give complete physical examinations to such a large number in one day with the number of members of the Society that would be likely to be available.

Dr. Reuben Peterson, Professor of Obstetrics at the University of Michigan, read a very interesting paper on sterilization and birth control. The paper was widely discussed at the meeting and the Society gave a rising vote of thanks to Dr. Peterson.

BAY COUNTY

The following programs have been recently provided the Bay County Medical Society:

February 27—Dr. Howard Lewis, Professor Physiological Chemistry at University of Michigan: "Acidosis and Alkalosis."

March 12—Dr. Grover Penberthy, Detroit: "Appendicitis in Children."

March 26—Dr. Louis Hirschman, Detroit: "India."

Friday evening, May 18, the society will act as host to the members of the adjoining County Societies, viz.: Saginaw, Genesee, Tuscola, Midland and Alpena, with a banquet at the Wenonah hotel, Bay City, to hear Dr. E. Starr Judd, Mayo clinic.

The Bay County Society regrets to announce the death of Dr. Mary Williams, aged 75 years, Sunday, April 2, death being due to apoplexy.

Dr. Williams was active in the society and in many civic organizations until her sudden death at Mercy Hospital.

L. Fernald Foster, Secretary.

OAKLAND COUNTY

A meeting of the Oakland County Medical Society was held April 19, 1928 at the Merchant's Restaurant, Rochester.

Preceding the meeting a musical program was rendered by Marian Hinkle, pianist, Adell Spencer, saxophone, Hollis Hinkle, violin.

Among the guests present were Rev. H. H. Savage, pastor of the First Baptist church, Pontiac, and Dr. Harry Rimmer, Los Angeles, Cal. The latter gave an interesting talk relative to recent discoveries made in connection with the study of cell structure.

Dr. G. C. Burr, Detroit, presented a paper on "Tuberculosis of the Kidney," in which he discussed the advances made in the diagnosis and treatment of this condition during the past 25 years. The address was illustrated with lantern slides and motion pictures that featured a series of 500 animated drawings illustrating the technique of the operation for the removal of a kidney.

The following physicians were elected to membership in the society: Dr. Wm. Lloyd Kemp, Birmingham; Dr. E. J. Lindsay, Walled Lake, and Dr. John S. Lambie, Birmingham.

C. A. Neafie, Secretary.

MARQUETTE-ALGER COUNTY

The regular monthly meeting of Marquette-Alger Medical Society was held on March 16, at the Morgan Heights Tuberculosis Sanitarium, the Society being guests of the trustees and superintendent of the sanitarium. Dr. E. R. Van der Slice of Lansing, and Dr. J. W. Toan of Portland, specialists in diseases of the lungs, and representatives of the Michigan Tuberculosis Society and Michigan Trudeau Society, conducted a diagnostic post-graduate chest clinic which was continued throughout the day. A splendid dinner was served at noon to about 50, during which time short addresses were given by Dr. Paul Van Riper, of Champion, chairman of the Morgan Heights board of directors; Dr. E. R. Van der Slice of Lansing; Dr. J. W. Toan of Portland, and Mr. Walter F. Gries, county commissioner of schools and secretary of the Marquette County Tuberculosis Association, who spoke on "Tuberculosis from the Layman's Point of View." The dinner was followed by a short business meeting.

The clinic was thoroughly enjoyed by those present and all feel that these clinics, which are so helpful, should be continued.

The April meeting of the Society will be held in Ishpeming, at which time Dr. I. Sicotte of Michigamme will tell us of his experiences in European clinics.

Russell L. Finch, M. D., Secretary.

HILLSDALE COUNTY

The regular joint meeting of the Medical Societies of the Counties of St. Joseph, Branch and Hillsdale, convened at the Lantern Tea room, Hillsdale, Tuesday, April 3rd, at 6 p. m. After an excellent dinner enjoyed by about 23 men and Miss Knott of the Red Cross Association, the meeting adjourned to the Mitchell library and the president, after the reading of the minutes, introduced the speaker for the evening, Dr. C. G. Sturgis, director of the Simpson Memorial, and

Professor of Medicine, University of Michigan. Dr. Sturgis addressed the members on "Recent Advances in the Treatment of Pernicious Anemia" with lantern slide illustrations. He covered the ground as thoroughly as possible in a single lecture, showing the wonderful results of the liver diet and giving hope of equally good results with the liver extracts so-called, now available. He also explained the manner of their production.

Another point was the action of a certain stain (cresylblen) in differentiating the reticulated red cells of the blood, thus making it possible to diagnose pernicious from other forms of anemia.

The doctor answered a number of questions from members and at the close was warmly thanked by the president in behalf of the Societies and most instructive address.

The meeting then adjourned.

D. W. Fenton, Sec'y.-Treas.

IONIA-MONTCALM COUNTY

The April meeting of the Ionia-Montcalm Medical Society began with a dinner at the Winter Inn, in Greenville.

Dr. Richard R. Smith of Grand Rapids, gave one of his characteristic discourses on the "Treatment of Minor Gynecological Problems, especially those Arising from Childbearing." This was followed by a general discussion.

The committee appointed to report on the County Health Unit System, introduced the discussion of that subject; considerable informal talk ensued, the consensus of which was that some such arrangement will eventually come, and that our counties should avail themselves of the opportunity to be among the pioneers.

Motion by Dr. Penton, seconded by Dr. Peabody, that the Ionia section of the Society endorse the plan as outlined by the Commissioner of Health, was carried, with no dissenting vote, by the Ionia members present.

A similar motion by Dr. Lilly for Montcalm County, seconded by Dr. Swift, was carried unanimously by the members of that county.

The Secretary was instructed to inform the State Commissioner of Health of the action taken by the Society.

The Secretary was authorized to attend the May meeting of County Secretaries at Detroit; his necessary expenses to be paid by the Society.

The meeting then adjourned.

John J. McCan, Secretary.

ALPENA COUNTY

Regular meeting of the Alpena Medical Society, Thursday, March 22, at 6 p. m., at the Owl.

Present: Doctors Cameron, Bell, Newton, Burkholder, Jackson, Purdy, Woods, Williams, Secrist, O'Donnell, Mischner.

After a four-course dinner, the program of the evening was carried out.

Dr. F. J. O'Donnell gave an illustrated lecture on Joseph Lister. He stressed the change that Lister introduced in operative technique.

Dr. R. H. Woods presented a clinical case of a young man who had vertigo, attended with frequent vomiting.

Dr. C. M. Williams presented two men who had been operated on early for exophthalmic goiter. One had recovered good health, the other had not. The thought was advanced that some other gland than the thyroid was responsible for the poor result of the second case.

The application of Dr. Clinton A. Benzie for membership was received and referred to the

membership committee, consisting of Doctors Williams, Cameron and O'Donnell.

The subject of the desirability of a revision of our fee bill was brought up. Moved by Dr. Williams, supported by Dr. Burkholder, that a committee be appointed to revise the fee bill. Carried.

The president appointed Doctors Burkholder, Secrist and O'Donnell.

Moved we adjourn. Carried.

C. M. Williams, Secretary.

The regular meeting of the Alpena Medical Society was held at the New Alpena hotel, Thursday, April 19th, at 6 o'clock. Dr. Virgil L. Tupper of Bay City, read a carefully prepared paper on Goiter. He traced the history of the disease from the earliest times and gave a careful analysis of the various types of goiter with the appropriate treatment. A full discussion of the goiter problem followed, each member present participating. An invitation to the Bay County Medical meeting of May 18th was read.

C. M. Williams, Secretary.

BERRIEN COUNTY

The Berrien County Medical Society met in Niles at the Four Flags hotel for their April meeting on Wednesday evening, the 18th. A fine chicken dinner was served and two excellent papers read to the Society.

At the business meeting following the dinner the name of Dr. John Ames of Niles was proposed for membership. Upon the recommendation of the membership committee, he was admitted to the Berrien County Society by unanimous vote.

Announcement of the Post-Graduate Conference for the Fourth District, to be held in St. Joseph or Benton Harbor the latter part of May was greeted with enthusiasm by the members present.

This is the first conference to be held in this district in three years, and shows that the state officers are watching out for the welfare of the remote societies as well as those more centrally located.

Following the business meeting a concise paper was given by Dr. Miller of the South Bend clinic on "Intracranial Hemorrhage of the New-born." He summed the etiology, pathology and treatment of these cases in an interesting manner. The paper was discussed with interest and benefit to all those present.

Dr. C. C. Hyde of the clinic then gave a very complete paper on "Urinary Obstruction." This paper was a masterful presentation and yet given in such a manner that the general practitioners who usually see these cases first, could not help but receive a lot of useful information, especially in therapeutics. His paper was accompanied by lantern slides illustrating the different conditions mentioned. These slides were exceptionally clear and interesting.

It is regretted that more of the members were not present to hear these papers, this being about the smallest meeting numerically that this society has had in two years.

The Berrien County Society wish to extend an invitation to members of the profession to visit Berrien County during Blossom Week, May 7-13. All of the members of this society stand ready to entertain and show you through the orchards during this time. Bring your families for a drive through this district to see one of the most beautiful sights in the world.

W. C. Ellert, Secretary.

SAINT CLAIR COUNTY

Regular meeting of the Saint Clair County Medical Society was held at the Harrington hotel, Port Huron, Mich., Thursday, April 5, 1928.

Supper was served to 25 members and guests at 6:30 p. m. The following members were present: Doctors Smith, Stockwell, MacLaren, McKenzie, Ney, Clancy, Cooper, Heavenrich, Derck, Waters, McColl, Bowden, Ryerson, H. O. Brush, Martinson, Windham, O'Sullivan, Callery, Kesl, Attridge, Thomas, Morris, Vroman, Lane, Wellman and Caster. Dr. Frederick Lohrstorfer, a former member of the Society, was present as a guest.

President Smith called the meeting to order at 7:30 p. m., and upon motion the regular order of business was waived. Dr. J. A. Attridge read a very interesting paper on "The Patient Versus the Lesion." Discussion was opened by Dr. Ney, followed by Doctors Heavenrich, Bowden, MacKenzie. Dr. Attridge closed the subject in the usual manner following the discussion.

Dr. Theo. Heavenrich then invited the members of the Society to attend the Tri-State meeting to be held in Detroit next week.

Dr. J. A. Attridge read a report from the committee appointed to confer with the Port Huron Community Welfare League relative to a drive for funds with which to erect a new hospital unit. The Society gave the committee a rising vote of thanks, approval and support and the president re-appointed the committee with instruction to continue their work.

Meeting adjourned at 8:20 p. m.

FAREWELL TO DR. C. B. STOCKWELL

The president requested Dr. C. C. Clancy to preside as chairman for the remainder of the evening. Dr. Clancy made a very fine address in which he touched upon the splendid character, the sterling worth and professional accomplishments of the guest of honor, Dr. Charles B. Stockwell. After his address, Dr. Clancy presented Dr. Stockwell with a well filled purse as a token of the love and esteem in which he was held by the members of the Saint Clair County Medical Society.

Dr. Stockwell, in a few well chosen words, accepted the gift, and told of an incident or two in the early days of the community.

Following Dr. Stockwell the meeting had the pleasure of listening to splendid talks by Doctors Ney, Lohrstorfer, MacLaren, Derck, Waters, McKenzie, Callery, B. E. Brush, Cooper and many others.

At the conclusion of these short talks Dr. Stockwell held an informal reception and farewell during which he bid goodbye to many of his former associates of the profession.

Dr. Stockwell plans to leave Port Huron in a few days to take up his home with a daughter at Montour Falls, New York.

George M. Kesl, Sec'y.-Treas.

Regular meeting of the Saint Clair County Medical Society, held at the Hotel Harrington, Thursday, April 19, 1928. Supper was served to two guests and fourteen members at 6:30 p. m. and the meeting called to order by the president at 7:45 p. m., with the following members present: Doctors Smith, Vroman, McColl, Carney, Burley, Webster, Waltz, Thomas, Attridge, Morris, Grice, Heavenrich, Kesl, Windham, Waters, Sites, Derck, Caster, Treadgold, Wellman, Ryerson and MacKenzie. Dr. Learmont of Crosswell,

a member of Sanilac County Medical Society, and Dr. Oswald Fluemer of Mt. Clemens, were attending as guests.

The secretary read several communications and Dr. Theo. Heavenrich, Counselor of the Seventh District, stated the next District Post-Graduate Conference would be held at Lapeer, Michigan, some time in the latter part of May and promised a very fine program.

Dr. Oswald Fluemer of Mt. Clemens then addressed the Society upon the subject of "Rheumatism and Allied Conditions." The speaker prefaced his remarks by saying that Mt. Clemens, as a spa, was well regarded throughout Europe, perhaps better known than throughout the United States. Dr. Fluemer then took up acute articular rheumatism, chronic articular rheumatism and allied conditions, in the order named, covering the etiology, symptomatology, pathology and treatment of each. The address was very interesting because it was based entirely upon the personal observations of Dr. Fluemer, who has been engaged in the treatment of these conditions at Mt. Clemens for some time. Some of the points touched upon by the speaker that were of unusual interest were as follows: The colon is oftentimes the seat of focal infection and one which is frequently overlooked. He recommends colonic flushes with a solution of sodium bicarbonate which will remove flakes of epithelial and focal debris and said that at least three flushes were necessary before the mucous membrane of the lower bowel became normal; another statement was, that in cases where the salicylates were not borne well, resort could be had to a series of three intravenous injections of a combination of sodium salicylate, sodium iodide and guaiacol, on alternate days. This will, in many cases, especially in the acute type of rheumatism, bring the infection under control and greatly lessen pain. Dr. Fluemer believes that all chronic forms of rheumatism should be classified under the term of chronic articular rheumatism, that all the various conditions styled osteo-arthritis, rheumatic arthritis, arthritis deformans, etc., are all the same condition but in different stages of development in pathological process; that is, cases of chronic rheumatism associated with obesity a pluriglandular formula containing orchic substance, thyroid and pituitary extracts, should always be tried. Our present knowledge indicates that endocrine dysfunction may play an important part in the etiology of rheumatic conditions; in the treatment of rheumatism of any type always remember to remineralize and alkalize your patient because the calcium and alkali reserves are very low; many of the so-called cases of neuritis and sciatica are due to the absorption of toxins from the bowel. Dr. Fluemer believes 75 per cent to 90 per cent of such cases are due to intestinal absorption; the proper diet for rheumatic patients should include a raw vegetable salad, exclude fried foods and be liberal otherwise. The rule of eating slowly and chewing the food well is good and no liquids are to be allowed with the meal. European physicians have found Pondorfs' Cuti Vaccine of value in the treatment of rheumatism, particularly the chronic type, and Dr. Fluemer is now carrying on experimental treatment with this preparation, having several patients under treatment. Amadoxyl is valuable, but must be given in a hospital because of the reaction. It should always be given slowly.

The society extended Dr. Fluemer a rising vote of thanks for his splendid address. Meeting adjourned at 9:40 p. m.

George Kesl, Secretary.

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

LECTIO MEDICI

It is true that some physicians do not read much of anything; however, they will not read this, and it need not be concerned with them. One is frequently told that keeping up with medical reading leaves no time for any other. So the speaker virtuously laments that, much as he would enjoy general reading, he simply cannot find time for it. This confession leaves me politely skeptical. I have never known any such readers. I find the most voracious readers of medical literature to be the very men who do the most general reading; and the men who do no general reading, do little medical reading. In reviewing Harvey Cushing's *Life of Osler*, H. L. Mencken said Osler demonstrated that a busy physician can find time to cultivate the humanities. A better example was never selected.

Physicians, as a class, are pretty well warped to a type. A physician who reads at all, usually reads much the same things you do. The similarity of taste is not hard to explain. First, the practice of medicine attracts men of similar interests; so we are really considering a selected group. Second, the same scientific training tends to give many men the same mental reactions. Third, there is a philosophy which is inevitably shared more or less equally by men whose studies, problems, and experiences are in biological phenomena. This last fact must be as explicable as it is obvious. After one has studied physiology the antics of contemporaries can never have quite the same dignity or significance; and after puzzling over nature's workings and her mistakes one inevitably conceives all life, all matter, all law as something different from what one had previously supposed it to be. It will at once be said that men of dissimilar temperaments will not be made alike by any experience. It is true that they will differ; but, as in genetics, the variations are not so remarkable as the similarity.

Biography and medicine have a common subject, the human being; biography thus has a singular interest for physicians, who, rather than being surfeited with people, are usually eager to see another individual presented, as a case is, and analyzed. Pepys' stone, Johnson's scrofula and dropsy, Queen Elizabeth's anaemia, Napoleon's cancer, all are bonds of sympathy between the sufferer, his biographer, and the medical reader. Biographical subjects, too, invariably call up in the medical reader's mind various physical and endocrine types; the great of all ages, revived by the biographer, reveal their foibles and their nobility just as their lesser kin do in the consulting room.

Affliction, so closely linked with human existence, permeates nearly all literature and heightens the interest of the medical reader. The Bible is a veritable library of infirmity. Isaac's blindness, Esau's hypertrichosis, Lazarus' and Job's furunculosis, Sarah's and Elizabeth's sterility and aged primiparity, Mary's parthenogenesis, and Lamar's twin pregnancy complicated by prolapsed hand (on which the midwife tied a red thread) are a few incidents of medical interest

that come to mind. Shakespeare also is a mine of interesting medical references, such as Lear's senile dementia, Ophelia's madness, Juliet's sleeping potion, Laertes' sword poison, Cleopatra's snake-bite, Edward's cures of scrofula, and King Henry's insomnia.

In school days history was a tedious subject. I often wonder if it is a profitable study for immature minds, for in boyhood the men of another century seem a separate race, living in another world. But as hurrying time begins to give a better appreciation of itself one reads history as one reads the morning paper, and the doings of the Crusaders seem no more marvelous or remote than the doings of the Ku Klux Klan or the League of Nations. It is this mature perspective which makes history attractive, and the physician may read of the London plague of 1665 with as much interest as if it had occurred during the World War. Indeed he will do so if he remembers or is reminded that in this same year Newton announced the Law of Gravitation, Richard Lower transfused blood from one dog to another, that Sydenham had fled from London, and that in the preceding five years Malpighi had discovered the capillary anastomoses, Robert Boyle had defined chemical elements and discovered acetone, DeGraaf had shown that ova came from the ovaries and was examining pancreatic juice, Willis had published his "*Cerebri anatome*," and Roonhuyze had described an operation for vesicovaginal fistula.

As modern medicine is intimately related to medical history, so the latter is bound up with general history. Indeed, for the medical man, all history becomes medical history. The physician thinks of Alexander as the patron of Aristotle the naturalist, he regards the luminaries of the Periclean Age as contemporaries of Hippocrates, Marcus Aurelius is associated with his physician, the great Galen, and Charles I may be remembered for one of his best acts, his encouragement of William Harvey. I recently saw an exhibit of Titian's paintings, and as I stood, awed, before them the thought came to me, "It was this man's pupil (de Calcar) who made the superb drawings for Andreas Vesalius' anatomy text; this man's teaching four hundred years ago influenced the spread of anatomical knowledge." It is needless to say that the association of Titian with Vesalius doubled my enjoyment of the paintings.—Chas. E. Dutchess.

PHYSICAL DIAGNOSIS.—Charles Phillips Emerson, A. B., M. D. Professor of Medicine, Indiana University School of Medicine. Published by J. B. Lippincott Company.

So far as I am aware, this book marks a new trend in works on physical diagnosis. This trend is hard to define, yet in going through the book it is definitely felt. Older books on the subject have seemed to be concerned with the mechanics of physical examination and the recognition of physical signs. Such books seem to be written for sophomores doing their first exercises in percussion; they might conceivably be written by competent and industrious third year men, i. e. hospital residents. The present book seems to

be concerned not primarily with the recognition of physical signs but with the recognition of diseases. It is apparently intended for fairly advanced students of the diagnostic art; it could only be written by a ripe medical scholar.

In his general introduction the author has included a brief historical account of the development of physical diagnosis from pre-Hippocratic times down to the present period. This is only a thumb-nail sketch, but admirably done. It reflects the author's broad knowledge and understanding of medical history. The book is illustrated profusely and well. It contains hundreds of excellent photographic cuts, as well as many schematic drawings and charts. That a great many of these cuts were furnished by the comparatively new Department of Illustration of Indiana University demonstrates the thriving state of the Indianapolis medical center which has grown up under the author's direction.

Emerson's "Physical Diagnosis" is a book which the average practitioner will want in his library.—C. E. D.

THE MEDICAL CLINICS OF NORTH AMERICA, Vol. II, Number 5 (Tulane University Number, March 1928). W. B. Saunders Co.

Dr. C. C. Bass contributes a brief article on malarial hemoglobinuria, and presents a case of oral infection. Other articles included are: "Internal Mycoses," by Dr. Aldo Castellani, "Sickle Cell Anaemia," by Dr. J. Holmes Smith, Jr., "The Leukocytes," by Dr. Elizabeth Bass, "The Value of Obstetric History," by Dr. Ray H. Turner, "Cryptorchidism and Endocrinology," by Dr. Russell C. Pigford. This is only partial contents of the book.—C. E. D.

AN ELEMENTARY TEXT BOOK OF GENERAL MICROBIOLOGY—Ward Giltner Professor of Bacteriology and Hygiene of the Michigan State College. 99 illustrations. Price \$3.50. P. Blackiston's Son & Co., Philadelphia, Pa.

This is an elementary text book covering the whole field of bacteriology non-pathogenic as well as pathogenic form with a chapter on microbial diseases of plants. The work is the result of the author's twenty years experience as a teacher. It is well written and the illustrations perform the function for which illustrations are intended. It is one of the most informative and interesting works on the subject we have read.

A COMPEND OF PHARMACY—F. E. Stewart, Ph. M., M. D., F. A. C. P. Based upon Remington's Practice of Pharmacy. Seventh Edition. The United States Pharmacopoeia X and the National Formulary V. Tenth Edition Revised and Enlarged by Heber W. Youngker, Ph. G., Ph. D. Philadelphia, P. B. Blackiston's Son & Co.

This little work contains a great deal of information on the subject of pharmacy in compact and readily available form.

FOOD INFECTIONS AND FOOD INTOXICATIONS—Samuel Reed Damon, Associate Professor of Bacteriology, School of Hygiene and Public Health, Johns Hopkins University. 264 Pages. 25 illustrations. Bibliography. Price \$4.00. The Williams and Wilkins Company, Baltimore, Md.

This volume is confined to information concerning infections (intoxications, and parasitic diseases acquired from food. Among the subjects discussed are paratyphoid, tuberculosis, septic sore throat, actinomycosis, botulism, mushroom poisoning, grain intoxication, milk sickness, potato poisoning, disturbances derived from fish and shell-fish, trichinosis, taeniasis, helminth infestation and general observations on other parasitic diseases. Each subject is handled thoroughly from the historical aspect of the disease, the oc-

currence of the infection and life history of the parasite where the condition is parasitic. Symptomatology, laboratory diagnosis, pathology and differential diagnosis are thoroughly discussed. And then we have fully dealt with the subject of prophylaxis and treatment.

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In many cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

GLUCOSE IN ENCEPHALITIS

The treatment of encephalitis by the injection of glucose has awakened considerable interest among specialists at St. Elizabeth's Hospital for the Insane. Dr. Walter Freeman, who has made many researches on encephalitis, declared today "that even though the way in which it works is uncertain, this mode of treatment undoubtedly offers something of importance in the treatment of nervous diseases." The improvement of acute cases of sleepy sickness by glucose injections was recently announced by Dr. Leland B. Alford of St. Louis, Mo. The action of the glucose is not well understood but it is believed that the compound exerts a protective action on the nervous system. The first clue to the beneficial action of glucose, according to Dr. Alford, came from its administration as nourishment to an encephalitis patient who was delirious and refused food. This took place in November, 1926. To the surprise of everyone the patient began to improve. On Christmas day she recovered her senses and by New Year's day returned home and has remained well ever since. Glucose seemed the most probable factor in this unprecedented recovery and so was given a trial in another acute case which likewise registered rapid improvement. The method was followed up with good results in as many as forty acute cases. The injections have no harmful effects, it was stated. It has, however, brought about only slight improvement in chronic cases. The chronic form of encephalitis is particularly stubborn and to date few ways have been found of combatting it. It will be many years, Dr. Freedman pointed out, before the glucose treatment can be properly evaluated but, he added, any method that gives hope of relief in dealing with this unfortunate disease, is worthy of trial and further research.—Science Service.

ADVERTISING

Somewhat vociferous advocates of professional advertising are occasionally heard in medical societies. One group has recently attempted to raise funds for the purpose of maintaining electric signs which are to tell the public of the effectiveness of our profession. Of course, a little farther down street, one might expect to see even more glorious displays erected by the various cults.

We should hesitate before succumbing to the temptations of those who think it is advisable to "sell the profession" to the public in any such manner. There is often an unexpected reaction to such procedures. We are reminded of the famous line in Hamlet, "The lady doth protest too much." By protesting too strongly, her statements were somewhat discredited. Even so in the business, social and professional world, quiet reserved statements, good manners, and satisfactory performance will gain greater consideration than a garrulous, boastful, protestation of prowess.—From the Bulletin of the Genesee County Medical Society.

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THE RESPONSIBILITY OF THE PRACTICING PHYSICIAN IN MEDICAL EDUCATION*

JAMES D. BRUCE, M. D.

ANN ARBOR, MICHIGAN

As with other responsibilities, that relating to medical education must primarily begin and continue with one's self, for, after all considerations are reviewed, the successful accomplishments of life are consecutive to adequate preparedness.

A few of the great group of practicing physicians have had the best obtainable equipment in undergraduate training and some of those few have embraced every opportunity in their post-graduate years to make all possible additions to their knowl-

edge of the rapidly progressing art and science of medicine. These men are, almost without exception, outstanding in qualifications for leadership.

A second group have not enjoyed the best of educational opportunities in the brief undergraduate period, but they have been men of ability, fine strength of character and indomitable perseverance, who have overcome early handicaps and forged ahead against frequent obstacles, reaching, in their post-graduate period, astonishing personal success. These, too, like the first group are, almost without exception, the qualified leaders in our medical fraternity.

There are other groups between these two and a final group which all can easily classify. In a final grouping may be found, men of finest and poorest undergraduate equipment, who have, for divers reasons, failed to succeed. Some have been overwhelmed by the influence of their environment. Some, again, have considered the five to eight years of time, together with the attending expenses, a sufficient investment for a medical business equipment and

* Read before the Post-Graduate Conference at Detroit, May 15th, 1928.

NOTE—This paper contributed by Dr. Bruce outlines clearly the policy of The Journal on the matter of Post-Graduate medical education. Dr. Bruce is not only director of Post-Graduate medical education, receiving his appointment from the Board of Regents of the University of Michigan, but he is likewise chairman of the committee of the Michigan State Medical Society which is concerned with the development of the plans for medical Post-Graduate work in this state. Dr. Bruce is also chairman of the publication committee of this Journal. It is apropos that the statements contained in his paper be made at this time following one of the most successful Post-Graduate Conferences ever held in the State of Michigan. Reference is of course to the four-day program already announced, which took place in Detroit under the auspices of the Michigan State Medical Society, the Wayne County Medical Society and the Alumni Association of the Detroit College of Medicine and Surgery.—Editor.

have directed their best efforts to recovering the original investment and compounding the interest thereupon. A further investment of money or interest has been of the most restricted nature.

POST-GRADUATE STUDY WELL BEGUN

This splendid clinic in which we are participating, is a praiseworthy union of interests and forces constituting the first effort for advancing and improving the opportunities for post-graduate study in Michigan. All over the country, meetings of doctors are being held tonight and every night during the year for the purpose for which we are assembled here. We commonly think of their purpose as for the presentation of new ideas and methods in practice, and here, indeed, are new ideas and concepts of disease and treatment advanced. But the great bulk of the work presented, consists in re-consideration and review of long-standing knowledge. To receive and retain in usable shape, the great bulk of medical school teaching is impossible and it is only as the customer, in the form of the patient, makes his demands, that the graduate finds out whether or not he is properly stocked in medical merchandise.

A GROWING SCIENCE

I believe that we shall have made a great advance toward the problem of continued and advanced education of doctors when we agree that neither the science nor the art of medicine can be fully achieved in the undergraduate school. Soundness of judgment is an essential in medical practice. It is seldom inherent but is the result of experience. It should not seem that our duty is done until these perfectly obvious facts are crystallized into a definite answer to the problem which they present. In his address on "The Educational Value of Medical Societies," Sir William Osler says, "There are many problems and difficulties in the education of the medical student but they are not more difficult than the question of the continuous education of the general practitioner; over the one we have some control, over the other none. The specialist may be trusted to take care of himself. The conditions of his existence demand that he be abreast of the times; but the family doctor, the essential factor in the battle, should be carefully nurtured by our schools and carefully guarded by the public."

The Council on Medical Education of the A. M. A. says that post-graduate

teaching is the outstanding medical problem of today. The Michigan State Medical Society and the University of Michigan have joined hands in an attempt at a solution of this problem. In our analysis of the situation, we feel that the mid-west should occupy and hold a very commanding position in post-graduate medical education. With Pennsylvania in leadership in the east and Minnesota in like leadership in the near west, why should not Michigan occupy a similar field with service to a large medical population, not only in Michigan, but in the nearby states and Ontario to the east?

In perhaps no other city of the world, of like size and wealth, are medical resources of the size and character of those in Detroit so little used for medical instruction. Undergraduate affiliations should in no way mitigate against the steady, progressive, intellectual development of that long, more important and more difficult period of medical professional life which begins directly after graduation and ends with the ending of one's professional career.

HARMONIOUS ADVANCEMENT

In no particular will the development of a sound post-graduate program interfere with undergraduate work, here, or in Ann Arbor. Rather, indeed, will the establishment of a community of interests, as contemplated in the proposals of the State Society, make for greater usefulness and added prestige to both our undergraduate medical schools. While accurate figures are not available, we may safely say that it costs the state of Michigan and the city of Detroit a round half million dollars a year to operate its undergraduate medical schools. A great British statesman has said, "Health is a nation's principal asset and the care of a nation's health the first duty of a statesman." Thus, our state has wisely undertaken the education of doctors and the city of Detroit is now carrying an additional burden in its splendid support of the Detroit College of Medicine and Surgery. However, practically nothing is being spent on the graduate for the maintenance of high standards of medical service nor have opportunities been offered him for self-improvement.

The support the state is now offering the Michigan State Medical Society would seem then, a wise economic conservation of medical investment maintaining the integrity of its original four or five years undergraduate subsidy.

METHODS OF EDUCATIONAL EXTENSION

Medical education is extended mainly in two ways. First, by so-called field programs in which county societies lead all local endeavors. These are assisted, from time to time, by the State Society or other extra local speakers or teachers who are prepared in special or general knowledge. The increased opportunity for frequent contacts of men in their local fields is of greatest importance for economic, social and educational values.

The Department of Post-Graduate Medical Education will participate in and supplement this division of work as opportunity may afford and, furthermore, it will be considered an important function of the department to systematically promote and initiate this division of medical education.

In a second and very important way, what has been designated consecutive or academically organized and controlled study courses in Medicine and Surgery, are giving fundamental and substantial results in preparing men for the specialties. An increasing number of the leading specialties are requiring certificates of qualification for their recognized members. For those members of the profession upon whom these requirements are made and also for those interested in advanced knowledge for the greater service it enables them to render humanity, there should be tempting and convenient opportunities for further medical education. In fulfillment of our obligation to the commonwealth and in the cause of medical education, the Committee on Post-Graduate Medical Education for the state of Michigan offers an outline of the more detailed program of further activities now in preparation.

A FORECAST OF PLANS

1. Every possible assistance will be given county societies in their scientific work, including assistance in the arrangement of programs and the supplying of speakers.

2. There will be further development of the present plan of One-Day Post-Graduate District Conferences. These have been found to be increasingly popular and useful.

3. The organization of two and three-day clinical programs, patterned after the present clinic. Where possible, this will be done in connection with hospitals in the larger cities. Flint and Grand Rapids have their programs under way for the early autumn and Ann Arbor will give a Three-

Day Clinic at the University Hospital during the football season.

4. The most common request from our members has been for the two to three-day clinical conferences as outlined above, but there is a considerable number who ask for short, intensive courses ranging from two to six weeks. At the present time, few doctors take more than a day or two at a time, away from their work to attend medical meetings. It is estimated that about 5 per cent take a month or more at yearly intervals. While this number does not seem great, it will, I believe, be greatly increased when attractive opportunities are more readily available. To provide for this group, we have carefully graded courses, two to six weeks in length, now in the process of preparation.

5. It is commonly believed that short cuts to specialties are unwarranted. We do, however, contemplate short period courses to specialists in their specialties, and the gradual development of complete courses for higher degrees.

As you all know, the University has responded to the recommendations of the State Society by the establishment of a special department to co-operate with it, in post-graduate development. As Director of this department, I beg to assure you that any sound educational program which you bring forward, will have our wholehearted support.

REGIONAL ANAESTHESIA AS APPLIED TO UROLOGY

R. E. CUMMING, M.D., F.A.C.S.
CHESTER C. AMES, M.D.

DETROIT, MICHIGAN

Just as spinal anaesthesia is a practice more than forty years old, so other methods for procuring anaesthesia in more or less localized and predetermined areas, have long been in use, their application to special departments of surgery awaiting the will of the specializing surgeon. For many years the spinal method has received enthusiastic support from a few urologists whose reports have been eloquent proof of the value of spinal anaesthesia in their hands, notably in prostatic surgery. Recently Lowsley and others have enlarged the scope of regional anaesthesia as applied to urological surgery, until there is a rapidly growing movement to employ the local or regional methods for procuring insensibility, to the limit of their possibilities.

One can scarcely visit any clinic today, and not be impressed by the rapidly increasing number of major operative procedures which are being carried out with regional anaesthesia. The accumulating facts relative to better mortality rates, reduction of hospital confinement, lessening of postoperative complications, and the undertaking of operations previously considered unsafe, will soon convince any opposition of the wisdom of adopting regional anaesthesia for suitable cases. Naturally, there will remain permanent need for inhalation narcosis.

SPINAL AND CAUDAL ANAESTHESIA

The purpose of this paper is to report our experiences with spinal and caudal or sacral anaesthesia, extending over a period of approximately two years and covering two limited hospital services. The additional time required for the practice of regional and spinal methods, in the absence of anaesthetists trained for this work, and our determination to select patients with a real need of some form of anaesthesia, have kept our list relatively small. For example, one might do caudal injections for all cystoscopies whereas only an occasional case justified its use, due to extreme nervousness, or excessive bladder and urethral inflammation.

SPINAL ANAESTHESIA

A brief resume of the history of spinal anaesthesia explains in part its more recent popularity; only a few of the many pioneer workers are mentioned. Corning in 1885 first suggested spinal anaesthesia, but it is to Bier that credit must be given for introducing it as a surgical procedure. Bier in 1898, used cocain as the anaesthetic agent, and obtained complete anaesthesia of the lower half of the body. The after effects, chiefly severe headaches, giddiness, vomiting and syncope, were so disturbing, that he gave up the method, awaiting the development of some less toxic agent.

In 1904 after Fourneau's introduction of stovain, spinal anaesthesia was again brought before the profession. In the same year Einhorn discovered novocain. It was found to be less toxic than any anaesthetic agent known at that time. After a few trials with novocain, the pioneers in spinal anaesthesia went back to stovain. Some surgeons still used tropacocain, isolated by Giesel in 1891, while a small minority used cocain in weaker doses of "purer" solutions. In the meantime care-

ful experiments were conducted with novocain on the human body and clinical observations actually tended to show that novocain must be preferred to other agents for the induction of spinal anaesthesia. Tiger of Los Angeles reports 10,000 cases of spinal anaesthesia using 1 grain of crystalline novocain, with only two fatalities.

ANAESTHESIA TECHNIC

The method we have used in obtaining anaesthesia is as follows: The site of injection is infiltrated with one-half per cent novocain. A 22 calibre spinal puncture needle is introduced into the spinal canal and from 10-15 c.c. of cerebro-spinal fluid is allowed to escape. This is done to decrease the intra-spinal pressure allowing for the increased activity on injection of the anaesthetic agent. It is thought that because of the increased activity of the choroid plexus due to irritation of the foreign matter, the spinal fluid is increased through raising the intra-spinal pressure. From 2-4 c.c. of spinal fluid is drawn into an ordinary 5 c.c. Luer syringe in which one ampoule or one grain of crystalline novocain has been placed. After dissolving the novocain in the spinal fluid it is injected into the spinal canal. The patient is then placed flat on his back and allowed to stay in this position until complete anaesthesia has ensued.

Particular attention has been given to the type of aspirating needle used. We find that the 22 calibre stainless steel spinal puncture needle is most satisfactory. This needle bends quite easily, decreasing the risk of breaking. An accurate check should be kept of the blood pressure: We take the blood pressure immediately before injection and after anaesthesia has ensued. If a decided change is noted, five minims of adrenalin hydrochloride is administered intramuscularly. This may be repeated. Some consider a blood pressure below 110 systolic, a contraindication for spinal anaesthesia but we have two cases in our series in which the systolic pressures have been 90 and 80 respectively. In both cases no untoward results were noted following the intraspinal injection of novocain.

OTHER METHODS OF REGIONAL ANAESTHESIA

Strictly speaking, regional anaesthesia, as a term, should not include spinal anaesthesia, although close analysis admits the grouping of all methods other than inhalation narcosis, and one must think of

infiltration, field block, caudal injection, sacral block, and the transsacral combination taught by Labat, to complete the list. Individual workers choose for themselves the single method found most useful, or combine several to suit the operative purpose. Thus for suprapubic prostatectomy (in our own field), spinal anaesthesia is ideal but the combination of caudal injection and abdominal wall infiltration or field block is equally good, and one is not justified in doing a spinal injection for cystostomy alone.

Some operators condemn sacral anaesthesia, having experienced failure either in the administration or no response in the operative field; this may be due to ignorance of the anatomy involved; one cannot expect anaesthesia in the scrotum or its contents, from sacral (or caudal) injection. We have seen scrotal operations attempted thus and failure result. Anatomic variations in the lower spine, congenital and acquired deformities, all make the method difficult at times. Our practice is to use sacral (or caudal) block where applicable, resorting to spinal injection if the former proves impossible.

The history of sacral and caudal anaesthesia, the latter term applying simply to injection of the sacral hiatus, is not important. This narrowing of the regional methods, with the development of perfections in technic, we owe to such excellent teachers as Labat who with others has shown how simple and accurate the methods are, and how successful where properly applied. We have found it advisable to employ the Labat type of syringe and needle, their excellent construction being an important adjunct for safety and ease of procedure.

Our statement above, relative to blood pressure readings and the use of adrenalin, applies to sacral methods as we employ them; in addition however, we make it a regular practice to lower the patient's head (Trendelenberg position) just after the anaesthetic has been given, and to keep the patient in this position, if possible throughout the operative period, and sometimes longer. This practice absolutely prevents cerebral anemia, which we have never seen occur, even in the presence of an alarming drop in blood pressure.

As to pre-anaesthetic drugs, such as scopolamin, morphin, atropin, or any combination of these, we are still undecided, having the opinion that often none are necessary, while in some cases, both scopolamin and morphin are of real benefit

and perhaps indispensable. We are aware that in some individuals sufficient insensibility to pain can be secured by this drug combination alone. Atropin is probably never indicated, unless several injections of morphin are used; in such a ninstance it should be combined with the latter in the first injection.

A total of forty cases have been summarized in tables for convenient reference. We have recorded our partial failures, fortunately having had so few as to increase our confidence to the point of regular use of regional anaesthesia, where indicated for difficult cystoscopy, prostatectomy, perineal section and the other procedures which will be mentioned on next pages.

REGIONAL ANAESTHESIA—GENERAL CONSIDERATIONS

Taking the specified types of surgical procedures in urology let us refer again to prostatectomy. In prostatic surgery we may consider the following:

a. Patients are poor surgical risks, often applying for relief at a late stage.

b. Cases coming apparently early as to prostatism, are often poor risks due to age, changes in cardiovascular stability, hypertension, various types of pulmonary disorders, diabetes, syphilis, often with advanced aneurysm.

c. Inhalation anaesthetics are notably kidney poisons; kidney function is the principal item related to prognosis in prostate cases.

Regional anaesthesia, acting upon a limited area, isolates it from vital organs; gives greater relaxation of the bladder neck, and rectal relaxation (of great importance). It adds considerably to operability and has quite definitely decreased mortality rates in our series of cases. In this connection, infiltration or field block are our choice for suprapubic approach to the bladder and in conjunction with caudal anaesthesia, serve admirably for exposure and all the detailed steps in resections for tumor, diverticula, surgical diathermy, implantation of radium or plastic procedures anywhere about the bladder.

Surgical conditions of the perineum such as stricture, rupture of the urethra, fistula, periurethral suppurations, prostatic abscess, early extravasation of urine, carcinoma of the prostate, all are readily operable with caudal anaesthesia or transsacral block. The stricture case with a history of long retention and consequent renal impairment, is particularly adaptable to local (regional), while general anaesthesia

is often dangerous. For perineal prosta-tectomy, the simple caudal injection (at sacral hiatus), is usually sufficient; here again the rectal sphincteric relaxation is a distinct advantage.

For renal surgery, especially in bad surgical risks, such as tuberculosis, polycystic disease, traumatic rupture, bilateral calculus disease, regional anaesthesia is a valuable adjunct. We stated above the steps necessary to obtain the required re-

sult with spinal technic. Paravertebral injection of novocain at the appropriate points also proves satisfactory, particularly if combined with splanchnic injections, which while theoretically difficult, are practically simple, and failure to do this part for control of the kidney and its pedicle, may make the proposed operation impossible due to activity of the sympathetic nervous system. The question of the necessity for splanchnic injections has

Name	Diagnosis	Operation	Type of Anaesthesia	Amount Used	Time	Percentage of Success
A. G.	Hypertrophied Prostate	Cystoscopy	Sacral 2% Novocain	40 c.c.	3 min.	100
L. W.	Chronic Posterior Urethritis	Cystoscopy	2% Novocain	40 c.c.	5 min.	100
C. L.	Chronic Cystitis	Cystoscopy	2% Novocain	40 c.c.	3 min.	100
D. B.	Ruptured Urethra	Perineal Section	2% Novocain	40 c.c.	15 min.	100
H. B.	Renal Calculus	Cystoscopy	2% Novocain	40 c.c.	.....	Failure due to faulty technic.
G. M.	Periurethral Abscess	Incision and Drainage	2% Novocain	40 c.c.	20 min.	75
D. Y.	Stricture of the Urethra	Urethroscopy	2% Novocain	40 c.c.	5 min.	100
T. C.	Hypertrophied Prostate	Cystoscopy	2% Novocain	40 c.c.	5 min.	100
T. O.	Stricture of the Urethra	Urethroscopy	2% Novocain	40 c.c.	5 min.	100
R. T.	Hypertrophied Prostate	Suprapubic Cystostomy	2% Novocain 1% Novocain Sacral and Block	40 c.c. ?	20 min.	75
C. P.	Stricture of the Urethra	Perineal Section	2% Novocain	40 c.c.	15 min.	100
E. M.	Hypertrophied Prostate	Suprapubic Cystostomy	2% Novocain 1% Novocain Sacral and Block	40 c.c. ?	25 min.	75
H. B.	Hypertrophied Prostate	Prostatectomy	2% Novocain 1% Novocain Sacral and Block	40 c.c. ?	20 min.	75
H. S.	Urethral Fistula (Anterior)	Suprapubic Cystostomy	2% Novocain 1% Novocain Sacral and Block	40 c.c. ?	20 min.	75
A. K.	Perineal Abscess	Incision and drainage	2% Novocain	40 c.c.	10 min.	100
J. W.	Hypertrophied Prostate Median bar	Caulk's Punch	2% Novocain	40 c.c.	15 min.	100
S. T.	Stricture of the Urethra	Suprapubic Cystostomy	2% Novocain 1% Novocain Sacral and Block	40 c.c. ?	10 min.	75
A. M.	Periurethral Abscess	Incision and drainage	2% Novocain	40 c.c.	10 min.	100
J. H.	Stricture of the Urethra	Suprapubic Cystostomy	2% Novocain 1% Novocain Sacral and Block	40 c.c. ?	30 min.	75
M. C.	Perinephritic Abscess (right)	Cystoscopy	2% Novocain	40 c.c.	5 min.	100
J. W.	Hydronephrosis	Cystoscopy	2% Novocain	40 c.c.	5 min.	100
J. B.	Stricture of the Urethra	External Urethrotomy	2% Novocain	40 c.c.	12 min.	100
W. S.	Stricture of the Urethra	External Urethrotomy	2% Novocain	40 c.c.	15 min.	100
W. S.	Perineal Abscess	Incision and drainage	2% Novocain	40 c.c.	20 min.	100
D. B.	Perineal Abscess	Incision and drainage	2% Novocain	40 c.c.	7½ min.	100

TABLE I.—COMPOSITE RECORD OF SELECTED CASES IN WHICH SACRAL AND TRANS-SACRAL ANAESTHESIA WAS ADMINISTERED

received a great deal of discussion; certainly its omission may account for failure of renal operative effort without recourse to gas or ether.

Some inconsistencies relative to scrotal surgery were mentioned above. For non-suppurative processes, ordinary infiltration suffices; for the suppurative condi-

No.	Diagnosis	Operation	Time for Anaesthesia	Reaction from Injection	Site of Injection	B.P. Before Injection	B.P. After Injection	Remarks
1.	Pyonephrosis (right)	Nephrectomy	7½ min.	none	10th to 11th dorsal	115 78	110 78	Anaesthesia from 12th rib downward. Duration 50 minutes.
2.	Extravasation of urine	Incision and drainage	5 min.	none	4th to 5th lumbar	100 60	90 50	Anaesthesia from crest of ilium. Duration 45 minutes.
3.	Perinephritic abscess	Incision and drainage	5 min.	none	10th to 11th dorsal	130 80	120 80	Anaesthesia from 12th rib. Duration 50 minutes.
4.	Urethral stricture. Acute retention of urine	Suprapubic Cystostomy	10 min.	none	11th to 12th dorsal	145 85	140 80	Anaesthesia from 12th rib. Duration 1 hour 5 minutes.
5.	Urinary extravasation. Multiple perineal fistulae	Suprapubic Cystostomy	5 min.	none	11th to 12th dorsal	140 80	140 80	Anaesthesia from 12th rib. Duration 55 minutes.
6.	Urinary extravasation. Vesical calculus. Lobar pneumonia	Suprapubic Cystostomy Removal of Calculus	5 min.	Pulse became very weak and thready, breathing became labored, slight feeling of nausea. 5 c.c. of adrenalin administered.	11th to 12th dorsal	104 64	90 50	Patient had a generalized anaesthesia, probably because of solution injected into the subdural plexus of veins.
7.	Hypertrophied Prostate	Prostatectomy (suprapubic)	4½ min.	none	12th dorsal— 1st lumbar	140 110	130 100	Anaesthesia from umbilicus. Duration 1 hour 5 minutes.
8.	Vesical calculus	none	15 min.	Patient developed an anxiety neurosis and refused to allow operation.	12th dorsal— to 1st lumbar	130 84	130 84	Anaesthesia from umbilicus. Patient described a choking sensation and fear of impending death. Temperature pulse and respiration was normal. No untoward results followed.
9.	Vesical calculus	Suprapubic Cystostomy for removal of calculus	10 min.	none	11th to 12th dorsal	145 90	140 80	Anaesthesia from umbilicus. Duration 50 minutes.
10.	Carcinoma of prostate	Suprapubic Cystostomy	5 min.	none	11th to 12th dorsal	160 84	148 84	Anaesthesia from umbilicus. Duration 55 minutes.
11.	Median bar formation	Colling's operation	5 min.	none	4th to 5th lumbar	140 80	140 80	Anaesthesia from crest of ilium. Duration 1 hour 5 minutes.
12.	Hydrocele (suppurative)	Excision of Hydrocele sac. Orchidectomy	5 min.	none	4th to 5th lumbar	115 60	104 50	Anaesthesia from crest of ilium. Duration 55 minutes.
13.	Impassable stricture of urethra	Suprapubic Cystostomy	5 min.	none	11th to 12th dorsal	140 86	130 80	Anaesthesia from 12th rib. Duration 50 minutes.
14.	Urinary extravasation	Suprapubic Incision and drainage	5 min.	none	11th to 12th dorsal	120 80	115 70	Anaesthesia from 12th rib. Duration 60 minutes.
15.	Urinary extravasation. Multiple perineal and scrotal fistulae	Suprapubic Cystostomy Incision and drainage	10 min.	none	11th to 12th dorsal	90 50	70 30	Anaesthesia was generalized. Because of low blood pressure following the injection 5 mms. of adrenalin was administered. Blood pressure then returned to 90/50. Duration of Anaesthesia—1 hour 5 minutes.

TABLE II.—COMPOSITE RECORD OF CASES IN WHICH SPINAL ANAESTHESIA WAS ADMINISTERED.

tion field block, which is easy as the parts are so readily accessible. For painful cystoscopy, consider the following:

1. Nervous patients.
2. Tuberculous bladder cases.
3. Operative procedures as for dilatation and examination of stricture cases.
4. Litholapaxy or other instrumental removal of calculi.
1. Fulguration.
6. For obtaining biopsy material. We have very happily used sacral anaesthesia for all six types of procedure, many times in our office, and nearly always with complete success. The advantage of this from an economic standpoint is evident.

AFTER-EFFECTS OF SACRAL AND PARAVERTEBRAL ANAESTHESIA

Nausea is rare, vomiting exceptional. Urological patients are able to take fluids at once, an invaluable asset. Usually food is acceptable the evening of the operative work. (These statements refer to cases having major surgical procedures such as bladder resection, prostatectomy, etc.).

Sloughing of tissue and abscesses at the site of injection occur rarely and are due to faulty technic. Immediately after the institution of anaesthesia, pallor and increased pulse rate are expected. We recorded our practice above relative to position and stimulation and are merely repeating the experiences of prior writers.

Our analysis of the first one hundred instances of regional anaesthesia in our service at Grace Hospital, will follow, our effort having been to carefully select cases for the methods described; we are omitting spinal anaesthesia from this particular survey, and also isolated instances of caudal, trans-sacral and paravertebral anaesthesia and a ten-year record of infiltration and field block work, preceding an arbitrary date, February 1, 1926.

ANALYSIS OF ANAESTHESIA RESULTS

Cystoscopy—including simple observation and ureteral manipulations—47.

Prostatectomy—28. Five one-stage operations.

For resection of urethra for stricture—6.

For dilatation of urethra for stricture—2.

For prostatic abscess—3.

For plastic operation on bladder—4.

For vesical and ureteral calculi—2.

For other procedures including drainage of perineal and periurethral abscesses—6. In many of these 6 cases operative work other than that for which the caudal (or

sacral) anaesthesia was given, was done, making classification difficult.

Kidney Surgery—1 nephrotomy and pyelotomy. 1 pyelotomy.

For the 47 cases with which the method of caudal anaesthesia was used for cystoscopy, in every instance it was successful, and in all except one, recorded 100 per cent. In most instances the examination would have been impossible without some anaesthetic other than that of questionable degree, obtained by urethral instillation. Quite naturally 47 instances in the total number of cystoscopies one performs in a period of nearly two years, is a small percentage, yet these represent cases of relatively great importance.

For the 28 cases of prostatectomy, the convalescent period was considerably shortened, in many instances the healing time markedly reduced. One unfortunate complication occurred, bringing about death due to the type of anaesthetic. In this case the wound healed on the eleventh day (the anaesthetic was one hundred per cent successful), and voiding occurred in fair amounts from the fifth day. Three days following operation (prostatectomy) a gangrenous area appeared over the sacrum at the site of novocain injection; a small slough formed but the local condition did not seem of great consequence. On the fifteenth day, a swelling developed in the right buttock which later formed a massive extension abscess apparently fatal. The gland proved to be carcinomatous.

In prostatic surgery with regional anaesthesia, an anaesthetic death is perhaps more readily ascertained; the important item in regard to this admittedly small series is that no operative mortality occurred, and a number of the cases were hopeless risks for general anaesthesia. We might cite cases with advanced aneurism, extreme myocarditis, asthmatics, etc., but wish to continue conservative, and always carefully consider other infirmities as well as waning renal activity.

Of the six cases operated upon with resection of the urethra for stricture, two were extremely poor risks, four had extensive scars from previous perineal operations, and one patient had recently had an almost fatal urinary extravasation. In one of the two kidney operations noted (paravertebral anaesthesia) the method was especially successful. The patient had had four previous cystostomies, for vesical calculi, diverticula, and persistent sinuses; also a right ureterotomy for stone and a right orchidectomy for a suppurative pro-

cess. He presented himself with multiple bilateral renal calculi and a left pyonephrosis.

SUMMARY AND CONCLUSIONS

1. Results in approximately 200 cases justify a further pursuance of the methods outlined.
2. In selected urological cases, regional anaesthesia proves an invaluable asset both as a factor for increased safety to the patient and in the rendering of the operative procedure more easily performed.
3. The method has proven of greatest value in prostatectomy and urethral resection.
4. The technic, while simple, requires practice and time for execution, and should best be delegated to professional anaesthetists.

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POST-OPERATIVE COMPLICATIONS*

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I was greatly pleased that your chairman allowed me to use as my title for this address Post-operative Complications. Such an occasion calls for a general appraisal of our progress in medicine rather than for any special statement of advances in a narrow field or a recital of newer technical methods. We have altogether too much specialization, and the example that we quite unintentionally set, by our enthusiasm to go forward in a special branch, exerts a bad influence on the medical student. He, emboldened by a praiseworthy spirit of emulation but long before he has had the opportunity to envisage the whole horizon of medicine, anxiously attempts to select his specialty. We are already in danger of losing from our ranks not only the general practitioner, that backbone of our profession, but also those individuals who though they may have later in life somewhat restricted the scope of their practice at least had the advantage of beginning with a large general experience in the field of medicine.

My topic allows me to discuss matters which should be of interest to every medical man, be he surgeon or physician, for it attempts to gather together in one lesson the experiences of people who may

have studied this matter from varied interests; some anatomical, some technical, some only with an interest in anaesthesia and others because of the pathology produced.

A broad survey of the whole field of post-operative complications reveals the fact that investigators have often sought for the explanation of these complications in unusual conditions of anatomy, physiology or environment. Our feeling, on the contrary, is, as you will see when we develop the thesis, that the only factor common to every surgical operation is the wound itself and we shall attempt to show that what takes place in this single common factor is responsible for the majority of all post-operative complications.

With the period that follows operative intervention begin the trials and tribulations of the surgeon. In its earlier days when surgery concerned itself only with emergency measures, the complications that ensued were belittled by the formidableness of the occasion and aroused but passing interest. Now, however, when so much of the surgeon's work is that of election and not necessity, it behooves him to consider in his appraisal of the risk to his patient not only the operation itself but also certain dangerous sequelae.

COMPLICATIONS GET SCANT ATTENTION

In the textbooks of surgery post-operative complications are dismissed with scant attention. Special difficulties dependent upon the local anatomical considerations, such as injury to the recurrent laryngeal nerve in thyroidectomy, are mentioned with the description of the operation, and a few paragraphs are devoted to pneumonia, embolism, etc., as isolated phenomena appearing during the period of convalescence. Even the great systems of surgery have failed to assemble in one group the post-operative complications. This dissociated manner of treatment hides their true relationship and thus fails to stimulate an interest in prophylaxis.

During the last twenty years there has arisen in the medical profession the very healthy tendency to study end-results, i. e., the final conditions of our patients following the use of various forms of therapy. In surgery this has meant the final result achieved by a special operation or procedure. It has served an admirable purpose in surgery and has emphasized what grave sequelae may follow even simple operations. The grouping of such sequelae has led to further experimental work in an attempt to define the cause for these com-

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plications. As a result, we now know a great deal concerning the etiology of post-operative complications, and the knowledge thus accumulated has in turn led to a constant and steady improvement in the choice and technic of surgical procedures.

PREPARATION OF SURGICAL PATIENT

In the first place, such a method of analysis pointed out gross errors in anaesthesia, asepsis, and hemostasis until difficulties attendant upon lapses in surgical technic have been minimized. Next, it was found that a proper preparation of the patient for the ordeal of the surgical intervention obviated some of the undesirable sequelae. This point cannot be too strongly emphasized, for it is certain that our earlier methods of preparation devitalized patients and rendered them more susceptible to certain distressing post-operative complications. The recent advances in our knowledge of the action of drugs used preliminary to operation and during operation, as well as the experimentally proven facts concerning acidosis and allied disturbances, demand a readjustment of our ideas of what is the best preparation of the patient for operation. Twenty years ago rather rigid starvation as well as the withholding of water accompanied by severe purgation was the accepted regimen. This was based on the assumption that post-operative vomiting and distention were less likely to occur with empty intestines. The dangers of dehydration, starvation, and the paralytic condition in the bowel following strong catharsis were little understood. It seems unnecessary to go into this in any detail here, since the matter is covered even in the modern textbooks of pharmacology and physiology. It is now generally appreciated that starvation and dehydration lead to acidosis, and acidosis in turn to serious general circulatory embarrassment. It is, moreover, the common clinical experience of all surgeons that a high fluid intake is a procedure of paramount importance in post-operative therapy. It has been further claimed that not only should water be allowed in abundance up to three hours before operation, but that in order to assist the liver, which is susceptible to damage by most inhalation anaesthetics, sugar should be given in large quantities the evening preceding operation for its protective action. Both experimental investigations and clinical experience emphasize the fact that in the pre-operative preparation the patient should be disturbed as little as possible from his normal daily routine.

WHY EMERGENCY CASES DO WELL

That such a course is advantageous has been abundantly proven by the excellent post-operative course of patients submitted to emergency operations where there is not time for any special preparation. Thus, cases with sudden intra-abdominal inflammatory disease, such as occurs when a viscus ruptures, or cases of severe trauma which are operated upon shortly after recognition usually run a smooth post-operative course. Also there has developed in the past ten years a feeling that special cases, such as those with exophthalmic goitre, are better cared for if the operative ordeal is masked to the last moment. These cases, therefore, are given no preparation and seem to do well. It is a good example of surgical conservatism that, though cases which are frequently a source of worry to surgeons are given no preparation because it seems to be of benefit, other cases which are less formidable and, therefore, will stand special preparation should still be submitted to a routine that is nothing more than an obsolete heritage from a former period of surgery.

IMPORTANCE OF MENTAL ATTITUDE

These matters of the preparation of the patient for operation often play a dominant role in the complications which ensue. Of equal importance with matters of physical preparation is the problem of a correct appraisal and handling of the mental attitude and reactions of the general nervous system of each case. Volkmann, in the 1927 meeting of the Deutsche Gesellschaft für Chirurgie, discusses this aspect of our surgical patients. He states that about 0.2 per cent of all cases develop some form of psychosis, males predominating, and he intimates that a more careful pre-operative study of the nervous system with the institution of proper environmental conditions might have lessened the incidence of such sequelae. At any rate, such a study emphasizes the fact that environmental adaptations in individual cases are important and that in treating the body no physician or surgeon can afford to neglect the mind.

In addition to prophylactic measures we must not neglect matters of diet. Both pre-operative and post-operative prophylaxis in this matter may set aside many troubles. Its value is so obvious in cases with disturbed metabolism (acidosis, protein retention, diabetes, etc.) or local disease (peptic ulcer) that it seems unnecessary to elaborate the details of dietary

therapy here. This, however, is an excellent opportunity to emphasize the importance in all hospitals of a competent dietary department.

CLASSIFICATION

It seemed impossible for us to discuss constructively the multitude of post-operative complications without some form of general classification. An etiological basis seemed advisable, since it would not only clarify the diagnosis but would suggest therapy by explaining the mechanism for the occurrence of the conditions. This method, moreover, would emphasize the means of preventing these sequelae. In attempting to simplify the classification on such a basis it was obvious that nearly all post-operative complications were caused by one factor, viz., trauma. This is the single factor common to all surgical operations. Inhalation anaesthesia is not common to all procedures, and it is well known that all forms of post-operative complications may follow not only operations under local anaesthesia but even manipulative procedures when no anaesthetic is used. Such trauma may be divided into four types: (1) mechanical, (2) infectious, (3) chemical, and (4) psychic.

Under mechanical trauma would fall the larger share of complications. The more obvious major complications due to such trauma are hemorrhage and the type of shock it produces, embolism, infarction, and indurated wounds (due to the reaction about devitalized tissue). A second group includes all those complications due to injury of the nervous system, such as that form of shock supposedly due to stimulation of a nerve, the various forms of dilatation of hollow viscera (stomach, intestine, bladder) with transient paresis, and the late nervous sequelae due to pressure by scar as found in the group of causalgias and "tardy" paralyses.

Under infectious trauma would fall two major groups: (a) those complications attendant upon a local infection at the site of operation (wound infection), whether the organisms were introduced at operation or merely disseminated in the wound from an already existent focus; and (b) those complications due either to the distant dissemination from the wound (pyemia, abscess of the lung, septicemia), or to the flare up of distant infection which had been present but inactive until the operation reduced the existing local or general immunity and allowed such infection to progress. In the latter group might logi-

cally fall the flare up of old tuberculous lesions, the lighting up of a dormant but chronic pyelitis, or arthritis.

Under chemical trauma would be listed those disturbances of metabolism, such as acidosis, hyperglycemia, uremia, etc., which are usually of lesser significance in the normal patient, but which assume great importance in a patient who is a "poor risk." The seriousness of the conditions in this group is greatly augmented by concomitant infectious or mechanical traumata.

Under psychic trauma would fall those cases which manifest mental changes following operation. The types of mental disorders seen after operation vary from simple depression to active suicidal mania. It is true that serious forms of psychical disturbance almost always occur in patients in whom there is already evidence of mental deterioration. The lesson here emphasizes that most important axiom of medical practice that one cannot treat the body well unless one also treats the mind. Serious post-operative mental sequelae may be obviated by a proper appreciation of the mental condition before operation and the institution of proper suggestive, environmental, and therapeutic steps.

A TEACHING CLASSIFICATION

We feel that all complications probably fall under one or more of these simple groups. Repeated studies in isolated groups of special complications have greatly impressed us with the lesson in surgical technic emphasized by the etiological significance of trauma and have convinced us that various external matters, such as the kind of anaesthesia, the position of the patient and the pre-operative and post-operative care, usually play but minor parts in the incidence of these unfortunate sequelae. Since this is not the common method of classification, however, we have been accustomed to use for teaching purposes the following grouping:

1. Complications involving the circulatory system.
2. Complications involving the nervous system.
3. Complications due to infection.
4. Pulmonary complications.
5. Complications following operations upon "poor risk" subjects.
6. Complications dependent upon local conditions in special fields.

These very general headings permit us to emphasize etiology and thus stimulate

therapy and prophylaxis by reducing to simple terms the conditions at operation that result in subsequent disease. The utilization of so many divisions will, of course, necessitate some repetition; for example, thrombosis which is obviously a disease of the circulatory apparatus (Group 1) must also be mentioned under complications due to infection (Group 3), under pulmonary complications (Group 4), and perhaps again under complications following operations upon "poor risk" subjects (Group 5), and under complications dependent upon local conditions in special fields (Group 6).

Groups 1, 2 and 3 cover the more common complications and in our discussions we can touch only upon these main divisions. Thus, under Group 1, complications involving the circulatory system, we include hemorrhage (shock), thrombosis, embolism and infarction, and as subheadings thrombophlebitis, mesenteric thrombosis, and fat embolism. Under Group 2, complications involving the nervous system, will fall the psychoses, the acute dilatation of hollow viscera with distention, gas pains, urinary retention, etc. Under Group 3, complications due to infection, will come infections of all kinds, whether the extension of an infection already present, the occurrence of new infection at operation, or the occurrence of specific infections with the gas bacillus, the tetanus bacillus, etc.

Group 4, pulmonary complications, has been so frequently studied as an entity and is of such importance that it deserves separate discussion, although in our opinion its etiology would usually place it in Group 1, 2, or 3, or in a combination of them. Group 5, complications following operations upon "poor risk" subjects, deserves special comment, since the unfortunate sequela to an operation may in certain cases depend solely upon the general condition of the patient before operation. Thus, cases of thyroid disease, acute nephritis, diabetes, long standing jaundice, emaciation, dehydration, etc., involve certain risks that, if not appreciated and corrected before operation, entail grave sequelae. The treatment of such "poor risks" as a group permits great emphasis to be placed on the proper selection of cases and the proper preparation for the ordeal of operation in all cases. In Group 6, complications dependent upon local conditions in special fields, attention should be drawn to some of the more important complications dependent upon the local anatomy. Thus, in

thyroidectomy the recurrent laryngeal nerve is easily injured, in left nephrectomy the pleural space may be opened, and in cholecystectomy a segment may be removed from the common duct.

It is certainly the more common practice to group the complications anatomically and thus consider abdominal, genito-urinary, pulmonary and other sequelae as regional diseases, but such a method fails to emphasize the real lesson of the mechanism of origin of these unfortunate conditions which must be appreciated if we are to benefit permanently from any such study. The majority of complications are due to some form of injury common to all operations and are not dependent for their origin upon special anatomical features of the particular field of operation.

OPERATION PER SE RESPONSIBLE

Thus, a mere recital of the complications brings out clearly the fact that the operation per se is responsible for the ensuing condition. This is obviously the lesson of this discussion, and the importance of careful studies of each complication in the improvement of the surgical art cannot be over-emphasized. The result of such studies has been a continuous improvement in surgical technic and a tendency to standardize operations as evidenced by the many treatises on regional surgery. Unfortunately, the lessons learned by a few are not yet widely understood. It is obvious that more accurate hemostasis and a better control of infection will to a great degree lessen the dangers both of subsequent sepsis and of the complications associated with the circulatory apparatus, such as hemorrhage, thrombosis, phlebitis and embolism. Gentleness in the handling of tissues will mitigate to a great extent those complications dependent on an interruption of the normal nervous mechanism. It is unfortunate that surgeons cannot be taught histology from living material, and not from dead, paraffinized sections, for, if they as students handled living cells for microscopic study, what a convincing lesson they would acquire for their future handling of living tissues in the operating room!

This emphasizes technic to a high degree. One should, however, distinguish such technic from pure manual dexterity. Moreover, this should demonstrate the danger of speed, for one cannot assiduously control all bleeding, be exquisitely gentle, and yet operate in a scant fifteen to thirty minutes. It rarely happens today in surgery that speed is necessary or

desirable at the expense of accurate and delicate handling of tissues.

COMPLICATIONS INVOLVING THE CIRCULATORY SYSTEM

The discussions that come under this heading emphasize to the highest degree the importance of an etiological basis for arriving at a satisfactory explanation in this field of study. It is our belief that more than 50 per cent of all complications find their origin in vascular damage. Injury to blood vessels occurs in every operation; therefore, the ensuing discussion is applicable to every operative procedure. The methods by which we institute hemostasis and asepsis are the principles of surgery. The principle of hemostasis is now enlarged to include the gentle handling of blood vessels, as well as the actual arrest of bleeding so that thrombosis and subsequent embolism shall be minimized. It was an appreciation of these simple lessons which made William Stewart Halsted the greatest surgeon of his day and which has elevated modern American surgery through the influence of his teaching and that of his pupils to the high position it now holds.

The complications which follow injury to the circulatory system may be grouped as (A) general, (B) local, and (C) disseminated. Under Group A, complications with general effect, we include those clinical conditions (hemorrhage and shock) which result from a reduction of the blood volume; under Group B, complications with local effect, we include local wound conditions (hematoma, induration, "wound fever," etc.), and lesions in the area supplied by blood vessels distal to the wound (ischemia, gangrene, thrombosis, cyanosis, causalgia, etc.). Under Group C, complications with disseminated effects, we include the conditions dependent upon the transmission from the field of operation of thrombi formed in the wound. The latter may be carried to an artery under which condition a wide variety of clinical syndromes, from gangrene of an extremity to softening of the brain, may be produced, depending upon which vessel has been injured and where the embolus lodges; or the embolus may be, and more commonly is, transported by the systemic veins to the lung where again a different clinical disorder may be produced — post-operative "pneumonia", abscess of the lung, pleurisy, etc., depending upon the size and infectivity of the clot and the resistance of the patient.

The variety of clinical conditions enumerated above may elicit surprise upon the part of surgeons whose minds have been devoted more to methods of exposure and the conditions for which operations should be performed than to the technical performance of the task. Such minute details as clamping vessels before dividing them and then ligating the central end proximal to that portion crushed by the clamp are seen to assume a role of importance. Moreover, it is obviously wise to ligate venous channels as close as possible to the next channel with which they connect so as to do away with a vascular segment in which there is stasis, for stasis plays a role in thrombosis. Such technical details cannot be over-emphasized. A vein, if opened and injured before being clamped or, still worse, if kept from bleeding merely by the application of a piece of dry gauze, permits the union of all the more important factors necessary for thrombosis, viz., stasis, injured endothelium and tissue juices.

GREAT SPEED DANGEROUS

These facts should convince every surgeon that great speed in operating is a dangerous element, and those who pride themselves on their facility may well hesitate. It is impossible to fulfill the imperative demands of careful surgical technic and finish any procedure in a scant fifteen minutes. Fortunately for our patients, American surgery is tending away from the rapid, spectacular form of procedure which is simply an inheritance from the days when anaesthesia did not exist and when rapidity of performance lessened the terrible pain of the ordeal. Now we have the great blessing of anaesthesia, and the demand for speed has passed. Moreover, the rapid operator is sure to lose more blood than his more meticulous, technical colleague and thus not only will subject his patient to the dangers of local wound injury and disseminated vascular disease, but also will be confronted with the perils which attend a diminished blood volume. This is readily seen in the tendency of such operators to make a generous use of the transfusion of blood even in simple cases. Indeed the popularization of this latter procedure, a procedure which produces a profound psychological effect on the laity, as well as on the profession, has done much harm. It would seem wise for the men in responsible positions at the heads of clinics to demand of their associates a reason for each transfusion. If it is merely to bolster

up a patient after an operation, the transfusion may really constitute a criticism of the particular surgeon's method of operating, and it would be well to warn this individual that unless he can learn to operate without the aid of transfusion he should perhaps search elsewhere for his life's work. Thus the number of transfusions in any given clinic represents to a certain extent the type of technical surgery it practices.

It is not our purpose here to discuss in detail the clinical syndrome or the therapy of these complications. We are simply interested in focusing attention upon etiological factors. Thus in this first group of complications we are only anxious to bring forward the seriousness of injury to the circulatory system. The therapy of post-operative hemorrhage and shock should never be of the same interest to us as the prophylaxis of these serious sequelae. The frequency of thrombosis and embolism is not a matter of figures. We all can recognize massive embolism whether pulmonary or in large arterial trunks; what is far more important is that all surgeons should recognize that in every surgical procedure their patients are confronted with these dangers, and that when they do occur it is unnecessary to search beyond the wound for the etiological factors. The cause for many of the abrupt post-operative pulmonary disabilities, as well as the obvious extension of infection causing pyelphlebitis and mesenteric thrombosis lies in the wounds of our patients and not in any mysterious and indirect explanation.

COMPLICATIONS INVOLVING THE NERVOUS SYSTEM

Serious complications dependent upon injury to the nervous system are rare. In a vast number of complications, however, minor interference with the normal nervous mechanism probably plays a certain role, although the exact mechanism by which such conditions arise is still unknown. With increasingly more accurate information one has the impression that, except for the immense possibilities dependent upon psychic injury, operations themselves do not exert such a deleterious effect upon the nervous system as heretofore considered. Confirmation of this impression is derived from a study of the effect of protracted serious intracranial procedures, such as the extirpation of a brain tumor, where the patients make unusually uncomplicated recoveries. This is true unless there is great loss of

blood. The same observations hold true in relation to procedures upon the spinal cord and the other large nerve trunks. We have removed a tumor as large as two goose eggs from the mid-portion of the sciatic nerve where it lay as a small part of the generalized neurofibromatosis seen in von Recklinghausen's disease without being able to detect, either at the time of removal or later, the slightest effect upon the nervous system. It may well be that when one deals with large gangliated areas of the sympathetic nervous apparatus, such as occurs in abdominal procedures and particularly when the procedure involves the posterior peritoneal region, a different effect is produced as regards the nervous system from that produced when the major central and peripheral nervous systems are involved. However, the recent observations of Cannon and his colleagues that cats totally deprived of their autonomic nervous system live and act much as intact animals may indicate that we have unduly emphasized the importance of this part of the nervous system. The fact that the sympathetic nervous system is perhaps more resistant to anoxemia and trauma than other nervous elements would lead us to expect that the case is probably no different in this instance than when dealing with the central nervous system. However, disturbances of smooth muscle probably are produced reflexly from the site of the operation through the sympathetic system, as well as by direct injury to the local intrinsic nervous apparatus.

MAJOR EFFECTS ON MENTALITY

The experimental researches of Crile regarding the appearance of morbid changes in the cells of the central nervous system due to exhaustion following shock or hemorrhagic injury has not been corroborated. Experience, therefore, would seem to indicate that the major effects upon the nervous system following operation are produced upon the mentality and psyche of the patient and by reflex sympathetic action. We are, therefore, perhaps justified in grouping under the heading of this section chiefly the sequelae to fright and fear psychoses, and the depression caused by mental anxiety in patients with a nervous system which is not well balanced and in which the threshold for external stimuli is congenitally lowered. The fact, however, that patients with such a nervous system do come to surgeons does not in any way diminish the responsibility of the surgeon

to recognize this type and to use proper prophylactic measures.

It would seem, moreover, as if some of the simpler complications which follow slight operations under local anaesthesia may conceivably be due to slight injury to the neuro-muscular mechanism, and it is certainly possible that dilatation of the bladder and bowel may follow an operative procedure as the direct result of paralysis of the normal neuro-muscular mechanism. A similar change in the neuro-muscular mechanism of the lung may even play a part in certain post-operative pulmonary complications.

COMPLICATIONS OF GENERAL NATURE

Under this caption should be included the great group of post-operative psychoses in which the conditions in any given patient may vary from a simple hypersensitivity and frightened condition to a wild delirium which may bear analogy with the post-delivery psychoses of child birth, or with the confused mental and psychical picture present after operation in certain patients suffering with Graves' disease. One sees not infrequently, both before and after operation, patients whose condition is somewhat similar to the early stages of shock with a lowered blood pressure, capillary stagnation, and cyanosis, all of which are dependent upon the mental reaction of the patients, although the differential diagnosis between this condition and fat embolism is at times extremely difficult. It is, we think, quite safe to state that these fear psychoses and their sequelae do not occur in individuals with a normal nervous mechanism. The importance of recognizing the condition before operation, however, is well known to experienced operators, some of whom have even gone so far as to suggest that a patient who does not think he is going to get well is not a fit subject for surgery. This perhaps should not be translated too literally, but if the surgeon cannot give his patient the necessary courage and hopeful attitude to make him desire an operative ordeal, he would do well to worry about the post-operative complications of that particular patient. For the last fifty years there has been a great deal of investigation into the influence of mind over matter, a study which has found its greatest expression in the cult known as Christian Science. It is now time that the medical profession, whose skepticism and carelessness in this matter are partly responsible for the flourishing growth of this sect, should recognize the

underlying and important principle regarding the influence of mental states upon the general physical well-being of the individual.

LOCAL COMPLICATIONS

Post-operative intestinal distention (gas pains, paralytic ileus). This complication always entails discomfort to the patient, often is a source of protracted worry to both the patients and their family, and may become a matter of grave danger to the patient. As a result, a great amount of thought has been devoted to this topic and physiologists have repeatedly attempted to explain the mechanism by which this post-operative complication occurs. It has been shown that intestinal motility may be retarded by various simple forms of local injury which affect the neuro-muscular mechanism in the wall of the bowel, or there may be produced a reflex disturbance in the control of the movements in the intestine through injury elsewhere in the body. In spite of the many explanations, both by clinicians and physiologists, no satisfactory and complete understanding has been available. The previous discussions of this serious complication have failed to explain the simpler forms of ileus which accompany procedures upon the periphery of the body under either general or local anaesthesia. Previous explanations have also failed to show why, when one produces experimental motor paralysis of the intestine, acute dilatation does not follow almost immediately.

Recent investigations of this matter have brought forward divergent explanations. Markowitz and Campbell of Toronto have shown that spinal anaesthesia will restore normal bowel movements in cases of paralytic ileus. They interpret the resultant improvement as due to paralysis of the reflex arc through which inhibitory stimuli might pass. This experimental work seems to corroborate the earlier observations and general feeling that paralytic ileus is in the nature of a reflex inhibition due to injury to a nerve.

The most recent studies by McIver, Benedict and Cline indicate the possibility that post-operative distention in some cases may be largely due to air swallowed during and after the operation. These investigators have analyzed the gases which appear in the rectum and have showed that the nitrogen content is usually higher than in atmospheric air. During these investigations these observers studied the effect of stimulation and division of the extrinsic nerves (vagus and splanchnic). Sections of

these nerves invariably resulted in increased activity and the passage of air downward. It would seem possible to harmonize these latter investigations with our previous idea that post-operative distention is of neurogenic origin by accepting the fact that post-operative distention of the intestine may be due to swallowed air, but bearing in mind that the important point in the development of gas pains or ileus is a disturbance of the neuro-motor mechanism. "Cribbers" who swallow enormous quantities of air may become distended but do not develop gas pains or ileus.

After laparotomy there is usually a depression of peristalsis for about 24 hours. In ileus this period is prolonged and probably the degree of distention in this condition depends largely upon the state of the neuro-motor mechanism of the intestine.

POST-OPERATIVE ACUTE DILATATION OF THE STOMACH

Acute dilatation of the stomach is a striking clinical entity long recognized by clinicians. The mechanism by which this disorder is produced has been a subject of great controversy. Until recently it was supposed that the dilatation followed either duodenal occlusion from pressure of the mesentery of the small intestine or from paralysis of the muscle in the gastric wall. It would seem that occlusion of the duodenum could not alone account for the condition, since in experimental animals when unanaesthetized the forcing of air from a gastrectomy wound into the stomach does not cause great dilatation, since the air readily escapes via the esophagus; when the animals are anaesthetized, dilatation occurs. Such experiments, however, do not explain where the gas comes from which distends the stomach. Apparently the gas is primary to the fluid content, for we know from physiological experiments that distention of the stomach increases its secretion. The source of the air has been investigated recently by McIver who has shown by ingenious experiments that fermentation and secretion cannot account for the amount of gas present. This leaves atmospheric air as the only source of the gases which cause the distention. It was determined that during anaesthesia there is an uninterrupted flow of air into and out of the esophagus. Air is apparently passed downwards in the esophagus by its peristaltic motions, since these motions are not abolished by anaesthesia. The carrying

downwards of a small amount of air is of no serious consequence, but as air becomes trapped in the stomach, perhaps by nervous influence upon the cardiac orifice, and excess secretion occurs subsequent to the dilatation, then a vicious circle sets in, vomiting ensues, there is a loss of not only water but also chlorides, and we find our patient in the same dangerous condition that occurs with all cases of high intestinal obstruction.

It is probable that the above mechanism occurs in all cases. Moderate damage to the splanchnic or vagus innervation either directly or through reflex stimulation may play an additional role in the complete picture. When the action of the vagus is suspended, dilatation of the stomach occurs from paresis of the gastric musculature. The reflex disturbance is complicated and more or less made a matter of speculation because of the known independent power of function of the plexuses of Meissner and Auerbach.

RETENTION OF URINE

This is one of the most frequent complications of surgical procedures and is always a source of distress and worry to patients. Its importance in the minds of clinical surgeons is indicated by the great number of papers which appear suggesting methods of combatting the disorder. An analysis of the whole field of surgery reveals very interesting data regarding the incidence of this disorder. One is impressed that it is infrequent in children; that it is very frequent in operations in the vicinity of the bladder and perineum, the latter resulting in a large number of treatises upon this matter by gynecologists. Finally, clinical experience reveals the important role played by psychogenic reflexes. We know that if before operation patients are taught how to pass urine on a bed pan or into a bottle in bed that the practice thus achieved stands them in good stead later; and we also know that if patients are carefully screened or kept in rooms by themselves, and particularly when the nurse is sensible enough to leave the room so that the patients are alone, they find far less difficulty in this simple physical phenomenon. It is also common knowledge that the more unstable the nervous mechanism of the patient the greater the liability to retention of urine. Such a broad vision of the whole field of surgery leaves the definite impression that, except where local painful reflexes interfere, the matter of retention of urine is chiefly psychological unless there be actual damage to the nervous system.

It is known that the reflex control of the bladder resides in the spinal column at the lumbar enlargement but that there is also a central control in the region of the basilar nuclei. The information regarding these centers is both experimental and clinical. The latter is chiefly from our experience with spinal cord tumors and tumors in the mid and hind brain. The early difficulties in urination, particularly in children suffering from cerebellar tumors, is one of the best indications of a central urinary control. It is probable that in local operations about the pelvis the reflex arc for control of the bladder is interrupted. In operations distant from the bladder stimulation carried by the splanchnic and vagus nerves may interrupt the normal mechanism after the same fashion that normal interruption occurs in the conditions of paralytic ileus and acute distention of the stomach referred to above.

POST-OPERATIVE NERVE PARALYSIS

Under complications involving the nervous apparatus it seems wise to include the rare cases of post-operative paralysis. It is unnecessary to discuss paralysis resulting from gross nerve damage or to discuss separately here the hysterical forms which occur in patients with an unbalanced nervous system. There unfortunately occurs, however, on rare occasions paralysis of the extremities due to the mishandling of patients on the operating table. These paralyzes do not follow operations under local anaesthesia. They are the result of placing anaesthetized unconscious patients in positions in which nerve trunks are stretched beyond their physiological limits or pressed upon by apparatus or other impedimenta of the operating room. The commonest form is perhaps the one which involves the arm and is due to allowing the extremity to hang over the edge of the operating table unnoticed throughout a long operation. These cases are simply the result of carelessness, but they do occur and are included here merely as another warning to surgeons of the dangers of the art they practice.

It may perhaps be wise to include here also the paralysis which follows the inclusion of extremities in plaster casts for long periods of time. Under such circumstances, unless there is pressure upon the nerve from some part of the apparatus or a fragment of broken bone, the paralysis probably antedated the inclusion of the limb in the plaster cast. It may seem unnecessary to some to bring up this matter, but in the

treatment of fractures it is quite certain that many surgeons have not yet learned that examination of the blood vessels and the nerve is infinitely more important to the patient than damage to the bony parts.

COMPLICATIONS DUE TO INFECTION

Infection remains the greatest danger to surgery. The events which must precede every surgical ordeal are so numerous that it is difficult for all the details upon which asepsis depends to be carried out completely. No matter how efficient our sterilizers, it is almost impossible to kill certain organisms in spore form. There is also the immediate difficulty of the operation itself; it is impossible to sterilize the skin, and even when all precautions are utilized and every rubber glove has been proven intact it is difficult to have four or five pairs of hands sterile. Surgeons know that some bacteria enter every wound. The fact that wounds will heal under these circumstances has perhaps often led to carelessness.

Arthur Tracy Cabot wrote that "every operation is an experiment in bacteriology" and William Stewart Halsted said "the operating room is a laboratory for the surgeon." If we could only instill the attitude of such surgeons toward their work into all those who practice surgery it might be unnecessary to read this particular section, for then we should have developed what James Mumford called the "aseptic conscience" to its fullest extent. We at the present are able to penetrate all portions of the body, and it has become so simple to do this that the technical performance of the task has far out-run the mental and spiritual development of those who practice surgery. Freedom from infection in 90 per cent of surgical procedures has led surgeons away from an interest in this matter, and the fine details are lost sight of.

It seems necessary from the point of view of understanding the etiology of post-operative infection to group these infections into two great sections (1) new infection and (2) the spread of infection present before operation.

NEW INFECTION

By new infection we mean the occurrence of infection in a wound after operation, due to the placement of bacteria in the wound during the operative procedure or immediately afterward through contamination from adjacent parts before or at the time of the first dressing. The occur-

rence of infection in a wound after operation depends either upon the placement in the wound of sufficiently numerous or virulent bacteria to gain a foothold, or upon the lack of normal defense mechanism which permits the avirulent and ever present bacteria of the skin and air to make a headway and give evidence of their presence by subsequent suppuration. This type of post-operative infection is entirely a question of asepsis and immunity. Local trauma may often play a dominant role. Thus, if the surgery performed is of a rough type, if large groups of cells are tied off in ligating blood vessels instead of just the vessel itself, if there is much rough handling of tissues and wiping with dry gauze, if strong antiseptics are dumped into wounds, thereby killing a large number of cells, we shall have placed in such a wound a great mass of devitalized, dead and dying tissues which will call forth a large inflammatory reaction. There will occur in such a wound dead spaces in which the tissue is not approximated and where collections of serum and blood clot will appear. In these little lakes of serum filled with necrotic cells, bacteria will easily gain a foothold, for the leukocytes which will remain fresh and vigorous when in contact with tissues when freed in such a lake of serum eventually die and are ineffective in engulfing and killing bacteria. Moreover, when leucocytes die they set free a tryptic fermentation which acts as a solvent upon other devitalized tissues which may be present. The admirable study by Sir Almroth Wright of what goes on in open and closed wounds should be read by every surgeon. He will then appreciate the great battle for supremacy which takes place in even the simple wounds between the body defense and bacteria. A good surgeon must be a competent bacteriologist at least in the sense that he understands fully the general principles of immunity. The arguments put forth above apply not only to simple wound infection but in the broadest possible fashion to any type of post-operative infection, even to general peritonitis. Ordinary simple wound infection caused by skin bacteria, such as *staphylococcus albus*, is not severe and may result in a simple stitch abscess, but it should be an indication to every surgeon that this technic is faulty and needs improvement. If virulent bacteria, such as *streptococci*, reach the wound, the resultant lesion may be of serious import.

Our purpose in introducing this section is again to emphasize the great importance

of principles. The occurrence of post-operative peritonitis, parotitis, specific infection with the gas bacillus and the tetanus bacillus are matters of more detailed study. We are concerned here only with inculcating a viewpoint toward surgery without which progress cannot continue.

SPREAD OF INFECTION PRESENT BEFORE OPERATION

A large portion of surgery is dictated by the imperative demands of infection. In addition to the primary technical considerations of good surgery the presence of infection brings forth certain accessory requirements. In considering the spread of infection after operation there arises the important matter of drainage and the care of suppurating wounds. The grave danger of spreading sepsis in the surgery of a past generation has unfortunately resulted in an undesirable heritage among the present generation. In the era which preceded the knowledge of bacteriology and asepsis little was done for infectious lesions except to drain them. Thus it became customary to think that surgical performances in septic fields might be less delicate and require less perfect surgery than surgery in a clean field. As a result the surgery of sepsis is often left to junior colleagues in our large hospitals and to men whose judgment is not so mature. This is a most unfortunate attitude, for not only is it necessary to utilize all of the principles of surgery in treating septic wounds, but one must have a very thorough knowledge of bacteriology and immunity if one is to care competently for patients with infection. One sees this attitude of mind displayed in major clinics where such important matters as the surgery of a septic hand is left to junior assistants, whereas there can be no more difficult matter and certainly no more important matter than the adequate care and treatment of an infected hand. Every operation which penetrates a septic field, from the lancing of a boil to the removal of a gangrenous appendix with widely disseminated peritonitis, always involves the risk to the patient that the infection, though relieved locally, may extend by contiguity or by metastasis and become a source of mortal danger to the patient.

Dissemination of infection from a wound may occur by simple local extension or extension via the lymphatic or vascular channels. Local extension is usually due to a lowered resistance on the part of the host, but the surgeon may unwittingly spread infection himself by the nature and

position of the incision. Thus the process may be adequately studied in the simplest procedures. Nature, once bacteria get a foothold within the body, tends to wall off this lesion; it sends scavengers in the form of leukocytes into the field of battle and it concentrates about the offending organisms an increased blood supply with all the immune substances which are contained in blood serum. The increased pressure, the tryptic action of dying cells and the toxin of the bacteria create a spreading area of necrosis beyond which lies the walling off zone of the body reactions. In such a simple lesion the scales may be tipped in favor of the body by the simple addition of heat which, by increasing the number and mass of the immune materials, kills off the major number of the organisms and allows the remainder to be extruded as the covering of the body overlying the abscess breaks down. If now the surgeon approaches such a field and sweeps his knife widely from normal areas across the zone of walling-off through the central necrotic portion and out again into normal tissue, although he possibly assists the body by allowing some of the bacteria to be extruded, he also spreads the infection into areas which are not walled off. Because in simple cases the wound happens to be open the surgeon usually does not greatly jeopardize his patient, but that particular wound might have healed more quickly had the surgeon kept his knife within the limits of the areas walled off by nature. In streptococcus cellulitis this danger of early incision and of incision through uninvolved tissue before the defensive barriers have been erected is particularly dangerous. An appreciation of this simple phenomenon of inflammation and infection pertains to the treatment of major infectious lesions. One's judgment in the care of enormous carbuncles such as occur in the neck is dictated by the same simple considerations.

Extension of local infection via either the lymphatic or the circulatory systems may give rise to the most serious post-operative sequelae. Those of you who have been unfortunate enough to see a case of simple appendicitis succumb to pylephlebitis and abscess of the liver will need no further lesson. That such extensions can and do occur is our reason for this particular discussion. The presence of infection only adds to the liability for thrombosis and its resultant embolism. Thus the dangers of infection are perhaps

chiefly wrapped up in its relation to trauma to the circulatory system.

CLOSING REMARKS

The foregoing discussions which concern chiefly trauma and infection cover the more important principles that are involved in post-operative complications, no matter what the locality. There is no time here to discuss special fields for complications, such as the lung, the important group of poor risk patients and the complications dependent upon local conditions. Indeed, much of such a discussion would be so special and technical as to confuse and therefore detract from the value of the general presentation. It is our hope, however, that even in such a brief survey, we have been able to emphasize what goes on in a surgical wound and how the developments there may play a role in any special locality. It is a curious reflection on human nature that in the special field of pulmonary complications when certain surgeons proposed embolism as a possible cause of some of the special forms of complications it was the anaesthetists themselves who continued to insist that inhalation, aspiration and irritation were the chief causes, thus continuing to incriminate their own art—this in spite of the fact that increasing perfection in administering inhalation anaesthetics has but little affected the incidence of post-operative complications, and with the published findings of others that exactly the same complications in much the same percentage occurred when local anaesthesia was used.

For the opportunity to present this matter, I am very grateful and I hope you will all be able to agree in certain of the principles involved. The opportunity to unravel many of the mysteries that surround this important field of medicine is available to all of us. Indeed, many of these problems can only be studied at the bedside and their solution waits on that most difficult form of scientific medicine, accurate bedside observation.

ACUTE INVERSION OF THE UTERUS*

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Acute inversion of the uterus is one of the rare complications of obstetrics. The

* This and the three following papers constitute the program of a regular staff meeting of the Hurley Hospital of Flint, Mich. It is the purpose of this Journal to furnish the readers with papers and case reports of other Hospitals throughout the state from time to time.—Editor.

case which is to be reported is of great interest for this patient has had four inversions in seven years. The many phases of acute inversion, such as causation, duration before correction, methods of treatment, morbidity, subsequent pregnancies, etc., are very interestingly brought out in the study of this case.

In October of 1921, Mrs. R. B., aged 23, was delivered at home of a full term living child. The patient, a primipara, was first seen by the attending physician as the fetal head was crowning. Spontaneous delivery followed before any attempt at asepsis was possible. The uterus inverted almost immediately. No attempt had been made to expel the placenta either by pressure from above or traction on the cord from below. The placenta was attached to the inverted fundal wall. After quickly separating it, pressure at the most dependent portion easily corrected the inversion. There was but moderate hemorrhage and the temperature was never higher than 100. The patient was up about the house in two weeks.

Within three months, Mrs. R. B. was again pregnant. The pre-natal period was apparently uncomplicated for she sought no medical attention. Upon going into labor, another physician was called to the house and the same performance was repeated. No attempt at asepsis was possible before a spontaneous delivery had resulted. The uterus again inverted and the placenta had to be separated from the fundal wall and quickly replaced. In this instance, also, there was no history of forceful Crede nor traction upon the cord. There was no fever during the puerperium. The lochia was not excessive and the patient was up and about the house on the tenth day. Manual reduction was accomplished without difficulty in both instances.

Nothing was heard from Mrs. R. B. for four months, during which time she attended to her household duties and she considered herself in excellent health. Suddenly on the evening of February 26th, 1923, while carrying a heavy pail of coal, she experienced a severe vaginal hemorrhage and fell in a faint upon the floor. The physician who attended the last confinement was called. Making a diagnosis of another inversion of the uterus, he advised that she be removed to the hospital. This was refused and another doctor was summoned. He found the patient in shock and attempted to check the hemorrhage by vaginal gauze packs. These packs were removed in 12 hours and others inserted. This was repeated for six days. Profuse vaginal bleeding continued unchecked.

At this juncture, Mrs. R. B. was brought into the hospital and was treated by us for the first time. Markedly exsanguinated, with a pulse of 180 and a temperature of 103 and in a state of profound shock, the prognosis seemed extremely grave. Abdominal examination was unsatisfactory due to the thickness of the anterior abdominal wall. Rectal examination revealed the cervical ring through which the fundus had inverted. A small strip of gauze was found just inside the introitus and upon removing it, a round mass the size of an orange was found protruding through the contracted cervical rim. The uterine mucosa was a dark red and bled easily. Any attempt at reduction was abandoned due to the extreme shock. The vagina was tightly

packed with sufficient gauze to check the bleeding and 2,000 c.c. of intravenous saline were given. The recovery from shock was remarkable. Within six hours, the pulse had dropped to 110 and the blood pressure, which could not be obtained previously, now rose to 90/64. On the third day after entrance to the hospital, the patient's general condition had so improved that reduction of the inversion was favorably considered. Under ether anaesthesia, all manual attempts failed. The reduction by peripheral taxis described by Emmet and cornual and fundal pressure as suggested by Noeggerath were without avail. The anterior colpo-hysterotomy described by Spinelli was then considered the best method of reduction. The technique: The cervical lip on either side was grasped with a volsellum. A transverse incision was made through the vaginal mucosa just below the bladder reflection. The peritoneal cavity was then opened after the bladder had been separated from the uterus by blunt dissection. The entire anterior cervical and uterine walls were then incised down to the fundus. Reduction was then easily accomplished and a wedge shaped piece of uterine wall was removed to aid approximation. The anaesthetist at this point reported that the pulse had risen from 100 to 120 and suturing of the uterine wound was hastily completed. A gauze pack was inserted through the cervix up into the fundus and rubber glove drainage was placed in the anterior and posterior cul-de-sacs.

The convalescence was uneventful. The temperature rose to 103 on the second day, but rapidly subsided to normal. Vaginal bleeding was not excessive. The pulse dropped to 90 and the hemoglobin rose from 20 per cent to 55 per cent. The patient insisted upon leaving the hospital on the fifteenth day, stating that she never felt better.

During the next eighteen months Mrs. R. B. was closely observed. She rapidly regained strength. Her only complaints were of excessive menstrual flowing with an occasional spotting between periods and a dragging sensation in the left lower quadrant when on her feet for several hours. At the end of eighteen months, there was a slight prolapse of the uterus, probably due to the incomplete suturing at the time of the operation.

This interesting case was then lost sight of for three and one-half years. On December 12 of last year, a physician was again summoned to this patient's home and he found her between seven and seven and one-half months pregnant with a breech presentation. Labor pains had been increasing in severity for several hours. This physician insisted that she be taken to the hospital. The delivery was uneventful; the breech delivering spontaneously. There was no traction to aid delivery. Knowing the history of three previous inversions, the attendant placed his hand gently upon the fundus and he states that he could easily feel the uterus flatten at the dome and invert through the cervical rim. The placenta was again attached at the fundus. Separating it quickly, pressure upon the most dependent portion reduced the inversion, though there was considerable blood loss. The hand was left inside the uterine cavity until the uterine muscle was felt contracting about it.

During the puerperium, there was no excessive vaginal bleeding; the temperature did not rise above 100 and the patient insisted upon leaving the hospital on the eighth day. Her present

physician reported this evening that Mrs. R. B. is in excellent health. As she is now but 29 years old, the future may add other interesting chapters to this history.

CAUSES OF ACUTE INVERSION

Many authors have stressed the importance of manipulations in the third stage as causative factors of acute inversion of the uterus. Others have reported cases, such as ours, where no manipulations were employed and they have attributed inversion to a congenital weakness of the uterus. I believe this to be the chief factor in this type of case.

MECHANISM OF INVERSION

W. C. Jones in 1913 best described the mechanism of inversion. He writes: "The fundally attached placenta by its invasion of the inner circular wall of the uterus, and associated uterine blood sinuses, destroys the tonicity of this layer of muscle so that contraction of the outer wall which radiates most strongly from the insertion of the round ligaments below the level of the fundus flattens the dome and allows it and its attached placenta to be gripped by the lower unaffected circular fibers which then extrude it through the os."

TREATMENT

In considering the correction of an inverted uterus, it is the consensus of opinion that unless there is too much shock associated with the inversion, the sooner the reduction is accomplished the better for the patient. However, where the shock is severe, it is best to control the hemorrhage by sufficient vaginal packs and treat the patient for the shock.

When possible, manual reduction is the method of choice. However, as Norman Miller has stated: "Manual reduction becomes proportionately more difficult as the lesion continues and involution with contraction of the cervix may render reduction entirely impossible."

When surgical methods have to be resorted to, the colpo-hysterotomy described by Spinelli appears to be favored by the majority of operators.

SEPSIS OF INVERSION

Sepsis is not a frequent complication of acute inversion of the uterus. In a large group of cases reported, the incidence of sepsis was only 4.6 per cent. In our own case with 4 inversions, there was no sepsis.

SUBSEQUENT PREGNANCIES

A large percentage of these cases give

histories of again inverting with subsequent pregnancies. Especially is this true of those manually reduced. Certainly when a history is obtained of one inversion, the patient should be urged to enter a hospital with the onset of labor.

The management of pregnancies following operative reduction is not universally agreed upon. Phaneuf has stated: "The obstetric future of the woman who has had the Spinelli operation should be that of one delivered by a previous classical Caesarean section." Norman Miller writes: "Where a history of operative correction is given, an uncomplicated confinement may, as a rule, be anticipated. While the possibility of rupture of the uterus must be considered, the chances of its occurring are probably slight."

Our case, I believe, is the first one to be reported in the literature where inversion again occurred after operative measures had been employed to correct a previous acute inversion of the uterus.

N. B.—I wish to thank Doctors John Connell and L. L. Willoughby for the privilege of reporting this case in its entirety.

STATUS LYMPHATICUS

L. R. HIMMELBERGER,

(Pathological Laboratory, Hurley Hospital)

FLINT, MICHIGAN

NECROPSY REPORT

The subject was a colored child from the Pediatric Service of Dr. R. A. Stephenson.

EXTERNAL EXAMINATION

Subject is a male colored child, about nine months old, measures 27½ inches in height, about 40 pounds, very well nourished. The child has a very short neck, well muscled. There are no marks or abrasions on the body. Mid-line incision made. The panniculus over the chest is 2 cm. in thickness.

CHEST AND CONTAINED ORGANS

On opening the chest cavity, the thymus gland appears enlarged, and extends down over the pericardium to a point opposite the fourth rib. It is injected, shows petechial and ecchymotic hemorrhagic areas. The weight of the thymus is 23 gms., measures 8 cm. in length, 5 cm. in width, and approximately 2 cm. in thickness. There are no adhesions in either thorax.

Left lung weighs 100 gms. The upper lobe is crepitant, contains air. The lower lobe feels solid, is a dark red color, has a few nodules on the inside. Cut surface of this lobe drips blood of a dark red color.

Right lung weighs 100 gms., is free from adhesions. The upper lobe is crepitant, a light gray color. The whole lower lobe has a dark bluish discoloration on its surface, has some solid areas.

Cut surface of the lower lobe is dark red color, drips blood freely.

Pericardium contains about 20 c.c. of fluid.

Heart and aorta weighs 70 gms., the epicardium shows a few minute petechial hemorrhages. Valves appear normal. Endocardium normal. Heart muscle normal.

ABDOMINAL CAVITY

The abdominal panniculus is $1\frac{1}{2}$ cm. in thickness.

Liver weighs 350 gms., shows a mottled appearance, varying in color from a light yellow to a brownish mahogany red. On section the liver shows a mild congestion, lobules are distinct.

Gall bladder is dilated and measures about 10 cm. in length, about 4 cm. at its greatest width. There is one enlarged lymph gland along the cystic artery at the neck of the gall bladder. The bile in the gall bladder is of a light green color.

Spleen is rather swollen, about 8 cm. from pole to pole, and about 5 cm. across. It presents a mottled appearance, is of a dark blue color. There are numerous areas of ecchymosis over the surface.

Stomach is of normal size, not dilated.

Pancreas is of normal size, and normal firmness, shows no change.

Retro-peritoneal lymph nodes are markedly enlarged. On section the enlarged lymph nodes show petechial hemorrhage. All mesenteric lymph nodes are also markedly enlarged.

Adrenal gland is small, shows autolytic change.

Kidneys are of normal size, show no change other than persistent fetal lobulation.

Thyroid gland was of normal size.

Micro: Section from thyroid gland shows normal acini, colloid containing, numerous Wolfers' rest cells. There are no areas of small round cell infiltration, and there is no lymphoid hyperplasia seen.

Section from the lungs shows marked congestion of the blood vessels. The alveoli are mostly all engorged with blood, and there is blood seen in some of the bronchi. Another section of lung shows the same picture of massive congestion.

Section from the heart muscle shows no recognizable change.

Section from thymus gland shows extensive hyperplasia, as characterized by new blood vessel formation throughout the parenchyma. There is considerable fibrosis about all of the Hassall's corpuscles, which are scarred and hyalinized, some having the appearance of thrombosed blood vessels. Adjacent to these areas of fibrosis, the lymphoid hyperplasia is quite marked. There are many newly formed blood vessels with nearly imperceptible walls. The blood vessels, both new and old, are markedly congested. There is extensive free blood in some areas. Some slides show the areas of hemorrhage, which in the gross were described as petechial hemorrhagic areas.

Section from liver shows passive congestion, all blood vessels are engorged with blood, and the intra-lobular capillaries are all congested. There is considerable fatty change.

Section from lymph node shows marked hyperplasia, and also shows destruction of the germ centers of the lymph nodes. There is considerable endothelial hyperplasia and extensive new blood vessel formation, all vessels are congested.

Section from spleen shows extensive breaking down of the germ centers, congestion of the blood vessels throughout, the capsule appeared thickened. The germ centers all have a peculiar de-

mobilized appearance. Numerous of the cells in the germ centers seen under high power are multinuclear. In the pulp of the spleen there are immense numbers of red blood cells seen, and there are newly formed blood spaces with only the shadow of a vessel wall. All sections show the change in the germ centers, which appear broken down. The cellular elements are widely separated, except at the periphery, where a more normal appearance is seen. The blood vessels of those germ centers showing the greatest disturbance, show ageing change. The most marked picture in the spleen is that of the destruction of the germ centers and congestion.

Section of adrenal shows marked autolysis, no other change recognized.

Section from the kidneys shows marked congestion, extravasation of free blood in the parenchyma, no other change seen except developmental.

Pathological Diagnosis: Hyperplasia of all lymphoid structures, more particularly of the thymus gland, with fibrosis, extreme congestion. Status lymphaticus. Pulmonary congestion.

The association of hyperplasia of the thymus gland with sudden death was first reported in the eighteenth century by Bichat. Perhaps the earliest contribution of note was that of Paltauf in 1889, who considered hyperplasia of the gland as but one manifestation of what is now spoken of among clinicians as the "Thymico-lymphatic Constitution." He found not only hyperplasia of the thymus, but a similar change in all lymphoid structures.

Authorities differ on the question as to whether a separate clinical entity is represented by this condition, but a large number, notably Warthin, consider the etiology to be a varied one.

The gross pathology consists of enlargement of the thymus gland, and in most cases the lymph nodes, particularly the mesenteric, also show marked hypertrophy. The spleen is usually enlarged, sometimes to the extent that palpation on physical examination is possible.

Microscopically the findings are similar to those given in our autopsy report. They vary considerably, however. According to Symmers, a characteristic finding is focal necrosis of the germinal centers. Warthin calls attention to sclerosis in the thymus, which was seen in the case presented. This is considered as the end point of an attempted compensatory hypertrophy. In cases past the age of puberty hypoplasia of the cardiovascular system is reported, while lesions of the adrenals have been observed by others.

It will be seen from the case presented and from the observations of others that the condition is body wide, and not confined to thymus alone. The cause of death in these cases is problematical. Many sug-

gested theories have been advanced, but the obscure physiology of the gland together with the diffuse pathology presented in cases coming to the post-mortem table have left chaos in their wake. Neither have experimental studies been conclusive.

JAUNDICE

M. S. CHAMBERS, M. D.

FLINT, MICHIGAN

I wish to report tonight a very interesting case of jaundice. My purpose, however, in presenting this case is not so much for a review of the case itself as to call your attention to the method we have recently been using in classifying our jaundiced patients. I will first review the history and physical findings and then refer to the method used to determine the type of jaundice present.

The patient is 51 years of age and a nurse by occupation. She entered the hospital February 13th complaining of jaundice, epigastric discomfort and tenderness, loss of weight and loss of appetite. The symptoms began gradually about six weeks previously with moderate epigastric discomfort and tenderness at first occurring only after meals, but soon becoming practically constant. Shortly these symptoms were followed by jaundice which steadily increased. The patient made no accurate weight observations, but believes she lost about 12 pounds during the previous three months. Clay colored stools were noticed two weeks before admission and except for one yellow stool three days later, persisted until after operation. The urine remained constantly dark from about five days prior to admission until after operation.

The patient had typhoid fever 27 years ago and three years ago the gall bladder, containing several stones, was removed.

The father died of "catarrh of the stomach" and the mother of "diverticulum of the esophagus." Otherwise the history is essentially negative.

Physical examination showed a fairly well developed and nourished adult female. The skin and sclerae were moderately jaundiced. The mucous membranes were of good color. The head and organs of special sense were negative. The neck, breasts, thorax, heart and lungs showed nothing remarkable. The blood pressure was 110/80. The abdomen was symmetrical and level with the thoracic cage. A well healed upper right rectus scar was noted. Palpation showed rather marked diastasis recti. There was moderate tenderness in the pyloric region and a small mass was thought to be present in this area. The liver edge was just palpable below the rib margin in the costal angle. The extremities showed nothing remarkable. The reflexes were normal throughout.

Before going further with the findings in this case let me tell you something of the method of classification to which I have already referred. In the first place we try to fit our jaundiced cases into one of the three clinical types of McNee, namely, obstructive, intrahepatic (toxic or in-

fective) and hemolytic. In order to do this we use the very efficient method recently advocated by McVicar and Fitts of the Mayo Foundation. These authors make the following statement: "In our opinion the essentials to a working classification may be grouped as follows: (1) The reaction of the jaundiced serum to the Van den Bergh reagent (whether direct or indirect); (2) the height and behavior of the serum pigment curve as determined by the Van den Bergh test or by the icterus-index method; (3) the quantity of bile reaching the intestines as determined by siphonage of the duodenal contents, and (4) the presence or absence of pain, and its character when present."

Obstruction to the bile flow is indicated by a direct Van den Bergh. If the obstruction is complete we have the additional findings of a stationary or steadily rising icterus index and continued absence of bile in at least five daily specimens obtained by duodenal siphonage. Constant absence of bile pigment in the stools is also of some aid, but not as important as its absence from the duodenal contents. The type of obstruction can often be determined from the above findings together with a consideration of the age of the patient and the presence or absence of colic. McVicar and Fitts say that painless jaundice in a patient over thirty-five years of age, where complete obstruction has developed quickly, is overwhelmingly in favor of tumor of the pancreas. However, painless jaundice with partial obstruction or a free flow of bile would indicate either intrahepatic or hemolytic jaundice. The latter will usually show the characteristic findings, splenomegaly and increased fragility of the red cells. Painful jaundice, on the other hand, is usually caused by stone in the common duct or occasionally by stricture. In these cases bile can usually be found in some of the duodenal siphonage specimens.

With these observations in mind let us go over the clinical data and laboratory findings obtained in this case.

While under observation the patient's temperature, pulse and respirations remained normal. The weakness, loss of weight and loss of appetite became more noticeable and the jaundice gradually deepened. Daily urine examinations showed specific gravities ranging from 1014 to 1030, acid reactions, one plus albumin, no sugar, no urobilinogen, four plus bile and at times a few pus cells and granular casts with occasionally a few red blood cells. The blood Wassermann was negative. The blood count showed 5,190,000 R.B.C. with 90 per cent hemoglobin, 6,500 W.B.C. with 68 per cent polymorphonuclears, 31 per cent lymphocytes and one large mononuclear. The blood urea was 44, urea nitrogen 20.5, blood sugar 103 mgs. The coagulation time was 4 minutes and the fragility test was well within normal limits. Two fractional gastric analyses showed an absence of free hydrochloric acid in all specimens. The gastro-intestinal X-ray was negative. The Van den Bergh gave a direct reaction. Frequent determinations of the color index showed values ranging from 25 to 35 mgs. Frequent stool examinations showed a constant absence of urobilin. The benzidine test was negative on all stool specimens. Specimens of duodenal contents were not examined because of the patient's objection to swallowing the tube.

In summarizing the case most of us felt that the absence of urobilinogen from the

urine, urobilin from the stools and the persistently high icterus-index with a direct Van den Bergh indicated that we were dealing with complete obstruction of the common duct. Whether repeated examinations of the duodenal contents would have changed our view on this point is of course only speculative. In the absence of this data, however, the diagnostic possibilities were increased so that numerous pre-operative diagnosis were considered with the consensus of opinion in favor of carcinoma at the head of the pancreas. The surgical consultant, Dr. Randall, however, felt that there was too much tenderness for uncomplicated carcinoma. Because of the uncertainties involved and the steadily progressing symptoms exploratory operation was considered advisable. On February 24, a laparotomy was performed by Dr. H. E. Randall, who found the common duct normal in size, but involved in a mass of adhesions extending from the pylorus to the liver. The pancreas appeared to be normal and palpation of the bile ducts revealed no stones. A post-operative diagnosis of obstructive jaundice due to adhesions about the common duct was made. That the obstruction was only partial would seem probable in the absence of any noticeable distention of the duct. Following operation the patient's recovery was uneventful and she appears to be in perfect health at the present time.

INFECTIONS OF THE LIP

GEORGE J. CURRY, M. D., F. A. C. S.

FLINT, MICHIGAN

The fatal case which prompts the presentation of this subject to you, presented the following history in brief:

A young adult, aged 19, was seen in consultation March 6, 1928. He noticed a pimple about the center of the lower lip, one-half inch below the muco cutaneous margin, two days previous. He stated to his physician that he had squeezed it at the time, and his physician further stated that at the time of his first examination there was considerable redness surrounding it with some associated edema. Some pain was complained of. He was seen the following morning, at which time his physician made a linear incision over the area, obtaining a few drops of pus. The edema and redness continued to increase during the remainder of that day, and the following day as well. The patient's general condition suddenly became grave and he was sent to the hospital, in the late afternoon, the second day following his first visit to his physician. At the time of my examination, two days after the onset of his trouble, he was semi-comatose, temperature 104 and 105 degrees, pulse 120, respirations correspondingly increased, and gave the appearance of a very sick man. The margins of the wound were pouting, the entire

lower lip, left cheek, eyelids, and superior tissues of the left cervical and submental region were one edematous mass. There were areas of red and blue distributed throughout this massive edema. I advised non operative treatment, believing the patient to have a septicaemia. The usual supportive measures were instituted, but the patient's condition grew progressively worse, and he died 36 hours following his admission to the hospital. His leucocytes numbered 12,000 with 88 per cent polymorphonuclears on entrance, increasing to 20,000 with 90 per cent polymorphonuclears the following morning. Blood culture taken the morning following his admission to the hospital was positive for *Staphylococcus Aureus*. Necropsy was not obtained.

In reviewing the literature on this subject many cases similar to the above have been reported, calling attention to the occasional and always possible seriousness of facial and lip infections. There still seems to be some lack of unanimity in the treatment of these cases.

You will recall that in and about the lips the muscles are inserted into the skin. There is a scarcity of subcutaneous fat and loose subcutaneous connective tissue in which infection could easily localize. The facial vein is formed by the union of the frontal and supra-orbital, and that portion of the vein which extends from its origin to the lower border of the orbit is termed the angular vein, and branches from this pass backward into the orbit to communicate with the opthalmic which opens into the cavernous sinus. The later nasal veins arise from a plexus about the alae and tip of the nose and extend upward to open into the lower part of the angular vein. The superior and inferior labial veins arise from venous plexuses respectively in the substance of the upper and lower lips and communicate with the facial vein.

Communication is also established with the deep facial vein, which in turn communicates with the cavernous sinus through the pterygoid plexus. The facial vein and its tributaries to the interior of the skull have no valves so that blood passes from this vessel to the cranial cavity and in a reverse direction with equal facility.

Staphylococcus Aureus almost always is the infective agent. The fatal cases show thrombo phlebitis of the facial vein and its tributaries, which probably accounted for the discoloration of the edematous cheek and lip in this case. Metastatic abscesses of the lung and cavernous sinus thrombosis are also a part of the pathologic picture. It was mentioned that there was abundant vascular drainage of the lip region, thus making more likely venous

thrombosis. The infective agent is also brought into intimate contact with the venous plexuses of the lip due to the absence of connective tissue spaces. The constant motion of the lips may have a tendency to infection dissemination by what may be called a mild degree of squeezing or rubbing of the infection against the vein wall. The edema and pain following, no doubt, has a tendency to inhibit this motion, but at this point another factor enters the picture, i. e., the universal past time of picking and squeezing pimples. I believe we are all convinced, it is true, that force sufficient to express pus from a wound is sufficient to break down the protective wall nature has built, with a resultant dissemination of the infection into the surrounding healthy tissues. It is hazardous to squeeze any infected wound, but perilous to squeeze infected wounds of the nose, face and lips.

Numerous therapeutic agents have been advised in the treatment of this condition, among which may be mentioned, phenol injections, vaccines, cautery, roentgen ray, immediate crucial incisions, wet dressings, constriction hyperaemia, etc., but may I offer the following with indicated reservations:

If the pimples are left alone, they will almost always take care of themselves, and no doubt there would never be any indication for further treatment. When redness and edema of a limited area occur, hot moist dressings frequently applied with the patient under strict rest and close observation, will frequently be all that is necessary. The infection will either subside and absorb, or localize, and in the latter case will frequently decompress itself. If this does not happen, a very small crucial incision over the summit, no squeezing, followed by moist dressings if you desire, and very likely the next time you change the dressings, you will find the contents of the abscess on the gauze. In those cases where there is septicaemia and a positive blood culture, there is no treatment of any avail that I know of.

SOME THOUGHTS ON EPIDEMIC ENCEPHALITIS GATHERED FROM A RECENT VISIT TO EUROPEAN HOSPITALS

A. B. OLSEN, M.S., M.D.

BATTLE CREEK

While visiting the Commune Hospital of Copenhagen last autumn, Prof. August Wimmer, M.D., and Dr. Knud H. Krabbe,

both of the neuropsychiatric department of the state university, showed me their patients, among them a fair number suffering from chronic encephalitis lethargica. We discussed symptomatology, therapy and prognosis, and their knowledge and experience in dealing with these patients impressed me.

KRABBE'S NEW BOOK

In his excellent work, "Lectures on Nervous Diseases," published last year, a book well worth translating into English, because of its straight-forward, clear and simple presentation of the subject matter, Dr. Krabbe, in dealing with epidemic encephalitis, points out that Cruchet, Moutier and Calmette in April of 1917 reported forty cases of a disease which they named subacute encephalomyelitis. Although these were doubtless cases of epidemic encephalitis, scarcely any attention was given to their report. But a little later Prof. Economo of the University of Vienna described under the name of encephalitis lethargica, a disease characterized by paralysis of the eye muscles with diplopia and followed by a period of deep somnolence which might pass into coma and death. This publication aroused the attention of the medical world and numerous other reports and writings speedily followed until we now have an abundant literature on this destructive disease.

NOT A NEW DISEASE

It is the opinion of Dr. Krabbe that we are not dealing with a new disease, but with one that was recognized under the name of lethargic fever in ancient times and in the middle ages. This lethargic fever was associated with paralysis of the eye muscles. He also believes that chorea electrica, which was described by Dubini in the eighteen forties, was almost certainly an encephalitis with myoclonia. Further, he holds that the epidemic nona, which was described in 1890 as a disease which followed in the wake of influenza epidemics was epidemic encephalitis. At that time it seemed to be regarded as a mere curiosity of medicine. Crookshank believes the disease existed in the time of Hippocrates, and that there have been epidemics in European countries the past 450 years.

The protean nature of the symptoms is certainly remarkable. The classical ones of headache, fever, diplopia, and sleepiness are subject to variation. Even the drowsiness, which was at first looked upon as a

constant sign of the encephalitis, is not infrequently absent, and the reverse, sleeplessness, may take its place. Indeed, this is so often the case that Krabbe considers the name encephalitis lethargica unfortunate, and prefers the term epidemic encephalitis, and this is the usual designation not only in Copenhagen, but also in Berlin and Vienna, and, to a less extent, in London.

PROFESSOR WIMMER'S BOOK

In the early days it was generally believed that chronic epidemic encephalitis was a more or less permanent damage or defect following an acute inflammation. Prof. Wimmer was among the first to recognize the fallacy of this view, and he pointed out in his book "Chronic Epidemic Encephalitis" published in 1924 that the disease is really a chronically progressive one with periods of intermission of variable length, and that in this particular it resembles cerebro-spinal lues and disseminated sclerosis. It is very important for the clinician to bear this in mind in dealing with the patients, otherwise he will have no clear understanding of the real character of the malady.

INFLUENZA AND EPIDEMIC ENCEPHALITIS

Dr. Krabbe shows some striking similarities between epidemic encephalitis and influenza to which he calls attention. In the first place epidemics of encephalitis tend to follow epidemics of influenza, a common observation. Neither are accompanied by exanthemata. Putting catarrhal manifestations and involvement of the cranial nerves aside, the most striking symptoms of both infections are: fever, headache, lumbar pains and a varying degree of drowsiness. This being true, we can agree with Krabbe that a large number of cases of epidemic encephalitis are diagnosed in the early stages as influenza, a matter to be kept in mind by the clinician.

In speaking of the polymorphous pictures presented by epidemic encephalitis and comparing it with cerebro-spinal lues and disseminated sclerosis, Krabbe says that encephalitis has a stronger tendency to cause fever attacks, that it affects the alimentary canal more seriously, produces more pronounced neurasthenic symptoms, causes greater disturbance of sleep and of the cranial nerves than either of the two other chronic infections of the central nervous system. In addition, the chronic form is especially inclined to affect the

extrapyramidal motor system and the cerebral vegetative centers.

TYPES OF EPIDEMIC ENCEPHALITIS

Krabbe mentions several types as follows:

1. The classical type, forming only a minority, although a large minority of the cases.

2. The insomnia or sleepless type, associated with marked restlessness and psychic disturbances.

3. The meningitic type, with headache and vertigo as the chief complaints. The patient has Kernig's sign.

4. The hemiplegic type, presenting a picture resembling cerebral thrombosis.

5. Myoclonic type.

6. Neurasthenic type. It is often difficult to distinguish post-infectious cases of neurasthenia from encephalitis. These patients after a fever illness may suffer from tiredness and exhaustion for years, and later develop insomnia, cardiac palpitation, anxiety and pressure of the head. If nothing further develops the diagnosis is, of course, post-infectious neurasthenia.

7. Rheumatic chorea type.

8. Myelitis type, with the inflammatory process localized in the medulla oblongata producing symptoms of an irregular progressive chronic myelitis with spastic paralysis and disturbance of the sphincters.

9. Psychic type with pronounced mental symptoms, and involving, not infrequently in the case of children, a change of character.

Still other varieties are mentioned by Dr. Krabbe. Oligokinesia, bradykinesia, and bradyphrenia or psychic retardation are common symptoms.

The course of epidemic encephalitis may be as irregular and variable as the symptomatology.

PATHOLOGY

According to Dr. Krabbe examination of the brain of a victim of encephalitis shows an appearance quite different from that of other infections of the central nervous system. The marked meningeal or vascular affections which one observes in luetic brains will not be seen, nor the sharply limited sclerotic plaques which one finds in disseminated sclerosis. In this case the brain may have an almost normal appearance macroscopically or only show occasional hyperemic areas. But closer investigation by the aid of a microscope reveals a prominent round cell infiltration of the

blood vessels in certain portions of the brain. This inflammation is most marked in the pons and peduncles in the chronic lethargic cases. In chronic Parkinsonian cases the large ganglia are the chief seat of the pathological processes. There are also cases where the inflammation is distributed in the cortex cerebri and cerebellum as well as the brain stem.

PROGNOSIS

With regard to the outlook Dr. Krabbe holds that at present we know too little, about the course and terminal stages of the disease, to speak with finality, but he would not shut out all possibility that some of the Parkinsonian syndrome patients might not improve in the course of time, and this in spite of the fact, as he admits, that the general tendency hitherto has been toward greater rigidity with its accompanying debility. Other forms of chronic epidemic encephalitis may tend towards improvement, especially those with epileptoid attacks as the most striking symptom.

The doctor emphasizes the importance of always being exceedingly cautious about the prognosis. As a rule in the acute stages nothing can be said about the further course of the disease. If somnolence develops into coma the family should be prepared for the worst. But he also warns against giving too dark a prognosis in the chronic stages.

TREATMENT

Dr. Krabbe is not in favor of malarial inoculation nor protein injections. For sometime he has been giving injections of argotropin, a solution of colloidal silver combined with hexamethylentetramin. He reports that some of the patients react with a high fever, others are uninfluenced, while still others appear to show some improvement, but he is unable to say whether it is a case of *post* or *propter* in a disease with such a capricious and uncertain course as encephalitis.

He is more optimistic about the use of physiotherapy and in this particular appears to agree with Brandenburg of Berlin who will be mentioned later. Dr. Krabbe favors the use of mercury vapor and carbon arc light baths and thinks they produce considerable subjective improvement in many of the patients. He holds that phototherapy of this kind has a future in the treatment of chronic encephalitis. In addition he mentions massage and both active and passive joint movements as use-

ful procedures. Scopolamine is given to relieve the tremors and atropine to control perspiration and salivation.

BRANDENBERG'S OPINION GUARDED

At the Rudolf Virchow Hospital (2,500 beds) in Berlin it was my privilege to meet that wise and thoughtful philosophical physician, Geheimrat Professor Brandenburg. He is the head of the neuropsychiatric department and talked freely but not hopefully about epidemic encephalitis. Still, it would not be fair to say that he is entirely pessimistic. For the younger patients under thirty he thinks that something may be done for the milder cases but he is doubtful about the value of the present methods of drug medication. He told me that he had tried all of them, but without material success. It is his opinion that patient and persevering re-education and psychotherapy may help in favorable cases. It is necessary to get the hearty and faithful co-operation of the patient, who must be willing and able to make the necessary effort. Without that little can be done. He demonstrated a number of cases, all practically hopeless. In his terminology it is a question of pedagogy and psychic training. But his general outlook on the future of these patients is certainly gloomy.

THE VIENNA HOSPITALS

Vienna is undoubtedly the mecca of medicine. Here a brief digression may be permissible. The department of medicine of the state university is one of the three oldest medical schools in Europe. For many years it has been famous for scholarship and original research. Wagner von Jauregg, who was awarded the Nobel prize in medicine last year, Economo, the leading pioneer in the study of encephalitis lethargica, Fuchs, famous the world over for his eye work, Freud, the originator of psychoanalysis, Erdheim, the pathologist, to mention but a few of the leading men of today.

Some five hundred or more American doctors visit Vienna annually for post graduate study and clinical experience. About eight years ago a society was organized, called the American Medical Association of Vienna. All English-speaking doctors of medicine in good and regular standing in the profession are admitted to a life membership for the small fee of \$10. This association arranges with the various professors, docents and doctors of the uni-

versity for clinics, classes, lectures, demonstrations, dissections, cadaver operations, ward visits, etc. and assists its members in getting the particular training and experience they desire. The usual honorarium or fee is but \$5 an hour, and most courses run from five to twenty hours. If ten join the class, the cost per capita is only 50 cents for each hour of instruction. If twenty, the expense is halved, only 25 cents a lesson. Cadaver surgery is more expensive, as only two or three can operate at one time. Occasionally it is worth while for one or two doctors to engage the sole attention of the teacher and pay accordingly. The Austrians are good linguists and scores of the professors and teachers give lectures and clinics in English, so that almost all the classes are conducted in our native tongue. Vienna, with a population of about two millions, is one of the most beautiful cities of Europe. It lies on the Danube and is fringed on the south and west by the hills of the Austrian Alps. The Viennese treat Americans with a fine courtesy and consideration, and the members of the medical faculty of the university seem to take a special interest in visiting physicians and gladly give them every possible advantage for medical study and review.

PROFESSOR PAPPENHEIM'S CLINIC

The municipal hospital and infirmary together have about seven thousand beds, affording abundance of material for clinical study and investigation. In pavilion number eleven Prof. Pappenheim has supervision of some three hundred and eighty neurological patients. He welcomes visiting doctors and it is a treat to follow him on his bedside rounds. He too speaks good English and he is always keen to demonstrate cases of particular interest. He had about sixty chronic encephalitis cases under his care, most of them residuals from the epidemic of 1920. Lack of space forbids mentioning cases in detail.

Like most of the neurologists I interviewed, Prof. Pappenheim does not hold out much if any hope for the patient suffering from chronic epidemic encephalitis. He says frankly that he knows of no special treatment or drug for these patients and his view of the prognosis is also a gloomy one. Dr. Ernst Spiegel of the famous general hospital in Alserstrasse takes the same view. It is true that some doctors in Vienna have given these patients inoculations with malaria but as yet

without pronounced results, and most of them are very dubious about this method.

LONDON NEUROLOGIST'S EXPERIENCE

Epidemic encephalitis is not nearly as rare in England as one could wish. In London Dr. S. A. Kinnear Wilson, an internationally known neurologist, alone has about one hundred boys and girls under his care, of all ages up to sixteen. He believes in active treatment and uses freely various injections, scopolamin and other sedatives as well as physiotherapy. Nevertheless, he was quite free to admit that the results are thoroughly discouraging. But he feels it is good psychotherapy to keep up some form of active treatment, and so he tries one after the other. His view of the prognosis was as unsatisfactory as that of other neurologists. With the rest he thinks that there is still much to learn about this devastating disease and its prevention and treatment.

BRAIN HEMORRHAGE

LEO DRETZKA, M. D., F. A. C. S.
(Attending Surgeon, Receiving Hospital)
DETROIT, MICHIGAN

Analyzing the summary of the principal causes of death in the registration area of the United States, it is found that 87,064 deaths in 1925 resulted from cerebral hemorrhage, cerebral embolism, and thrombosis. The number of deaths due to cranial trauma cannot be determined because these deaths are charged to the various varieties of injury. It is safe to estimate that the traumatic group will equal the spontaneous group. Modern traffic accidents in the cities, and industrial casualties, together with brain hemorrhage due to constitutional illness, are rapidly increasing the toll.

Brain hemorrhage may be either traumatic or spontaneous. The traumatic variety belongs to the province of the surgeon and, if seen early and correctly diagnosed, is often amenable to surgical procedure. Modern management of brain injuries in the large clinics is rapidly reducing the mortality rate.

The traumatic variety may be classified as extradural, subdural, and cerebral.

EXTRADURAL HEMORRHAGE

Extradural hemorrhage is usually caused by a rupture of the middle meningeal artery, but may result from an injury to a venous sinus. After a lucid in-

terval, if the bleeding is massive, symptoms of compression appear. The pulse rate is low. The victim is dull, stupid and gradually passes into unconsciousness. If the clots extend toward the base, the pupil is often dilated on the same side and immobile. If the pressure is over the motor area, paralysis of the arm and leg of the opposite side soon follows.

SUBDURAL HEMORRHAGE

The symptoms in this type are often identical to the extradural variety, but more rapid in onset and more profound. Unconsciousness is less gradual, the pulse slow and full and there are other signs of definite brain compression.

A common lesion of the brain is intracranial hemorrhage of the newborn brought on most frequently by the use of forceps in difficult labor. Unlike the traumatic injury in the adult, where the hemorrhage usually is arterial, in the newborn it is most often of venous origin. The superficial veins of the cortex may be torn or the injury may extend into the longitudinal sinus or other vascular areas. The symptoms correspond to those generally found in brain injuries, spastic paralysis being the most common.

TRAUMATIC CEREBRAL HEMORRHAGE

In this variety, the symptoms are not classical and vary with the site of hemorrhage. They resemble the symptoms found in the spontaneous rupture of brain vessels. Intracranial pressure may be great and yet not register an accurate rise when measured by the spinal manometer. The presence of a uniformly blood-stained spinal fluid indicates bleeding in the subarachnoid spaces or into the ventricle.

In the early stage of hemorrhage, the ophthalmoscopic findings are usually negative. Yet this examination should be routine as it may disclose valuable information in late cases. The hyperemia of the discs, the character of the vessels, the edema of the nasal halves in conjunction with other leads may prove important.

SPONTANEOUS HEMORRHAGE

This variety belongs to the province of the internist and the hemorrhage is the direct result of constitutional disease, which has affected the circulatory system. In the aged, it is due to the progressive degeneration of the body tissues with the accompanying inelasticity of the vascular walls. In earlier years, the predominant causes are nephritis, syphilis, blood stream

infections or any of the large group of degenerating diseases.

Apoplexy may occur in any portion of the brain and either from the arteries in the base or cortex. The arteries that most frequently rupture are the branches of the middle cerebral which enter the anterior perforated space. The largest is known as the lenticulostriate or artery of cerebral hemorrhage. An apoplectic hemorrhage occurring in the lenticular nucleus may rupture into the lateral ventricle.

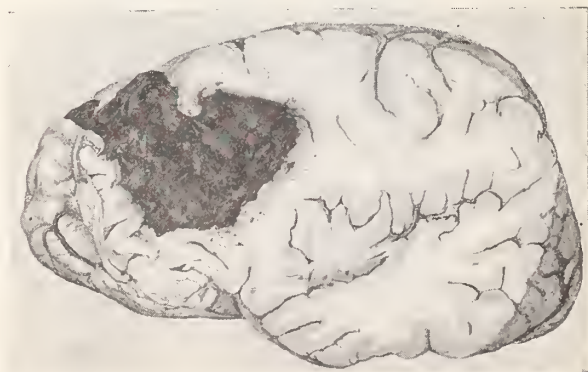
HEMORRHAGE INTO PONS

This variety produces two sets of symptoms depending on the location. If the hemorrhage takes place in the upper portion, it will affect the motor fibres of the face and the extremities of the opposite side. If the hemorrhage is below the point of decussation, the side of the face on the side of the lesion will be paralysed and the extremities on the opposite side. Pontile hemorrhages are usually fatal.



Cerebral hemorrhage, softening of brain tissue and rupture into the ventricle.

W. G., age 27. Patient entered hospital in a state of coma. Physical examination disclosed a well nourished and well developed male who was vomiting and perspiring freely. Pupils were equal and did not react to light. There was spastic paralysis of the left arm and left leg. Incontinence of urine. Pulse 78. Respiration 22. Spinal fluid bloody. Blood pressure 170/42.



Cerebral hemorrhage, frontal lobe.

Final diagnosis: (1) Cerebral hemorrhage, right. (2) Syphilitic changes in aorta, pancreas, heart and brain.

A. B., age 40. Patient was admitted to the hospital in an unconscious state, had epileptiform seizure in the admitting room and a similar attack in a taxicab on the way to the hospital. These attacks were followed by several others during the day. Physical examination disclosed pupils constricted and unequal and reacted only slightly to light. The right hand grip was definitely weaker than the left. Urine and blood chemistry

irregular and rapid. The right pupil was smaller than the left and had an irregular margin. The pupils reacted only to light. Blood pressure 130/70. Temperature rose from 98 to 104. Urine examination showed albumin 4 plus. Blood chemistry T. N. P. N. 61 and urea 70. Leucocyte count 10,000.

Final diagnosis: (1) Cerebral hemorrhage. (2) Lobar pneumonia, right.

Associated with: (1) Cardiac hypertrophy. (2) Chronic glomerulo-nephritis. (3) Generalized arterio-sclerosis. (4) Chronic interstitial hepatitis.



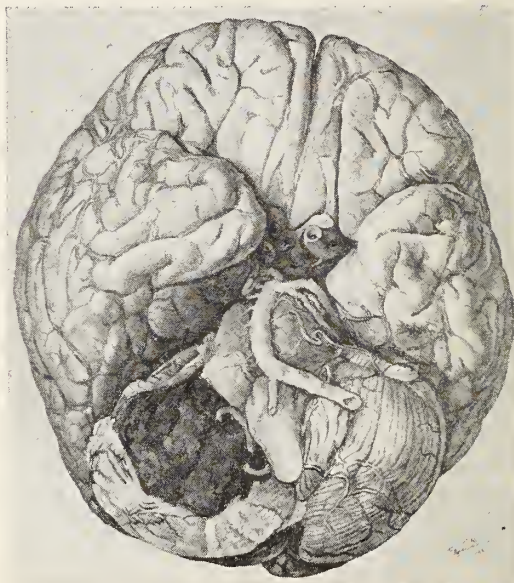
Fracture of the skull with extensive extradural hemorrhage and blood clot causing a compression of the cerebrum.

were normal. Blood Kahn two plus. Blood pressure 132/72. Pulse ranged from 80 to 160. Respiration increased from 20 to 60.

Final diagnosis: Cerebral hemorrhage, frontal lobe.

Associated with: (1) Localized arterial sclerosis of the spleen. (2) Fatty degeneration of the liver with contraction.

S. S., age 56. Patient admitted to hospital in state of coma with a history of becoming unconscious while at work. Physical examination disclosed a well nourished male in a state of coma and complete shock. The respiration was deep,



Right cerebral hemorrhage. Sclerosis of the Circle of Willis.

A. W.—Age 60—Patient was taken sick on the street, vomited several times and the speech was unintelligible. Indicated that he had a severe headache. Physical examination disclosed the right eye rotated downward, twitching of the left eyelid and the pupils were irregular and unequal, reflexes exaggerated, urine positive albumin, blood chemistry normal, temperature rose from 97.4 to 102.6, pulse from 100 to 144.

Final diagnosis: (1) Right cerebellar central hemorrhage. (2) Extreme edema of brain. (3) Marked arterial sclerosis of Circle of Willis. (4) Extensive nephritis.



Right cerebral hemorrhage involving the internal capsule and corpus striatum with rupture into the ventricle.



Pontine hemorrhage.

B. R.—Age 35—Seven months before entering the hospital, patient developed paralysis. Had two or three attacks all of which partially cleared up. Has had aphasia for the past two and one-half months. Paralysis came on suddenly. Complete history could not be obtained because of the aphasia. Physical examination reveals a well nourished young adult female, face flushed, exophthalmus present. There is a tremor of the tongue and left hand. Tongue protrudes to the right. Facial muscles of the right side not functioning, mouth being drawn to the left. Pupils are unequal, right being larger than the left, also irregular. Thyroid enlarged. Scoliosis of the spine. Spastic paralysis of the right arm and leg. Urine negative. Blood negative. Blood Wassermann negative. Spinal fluid Wassermann 2 plus. Spinal fluid cell count 30 per cu. mm. B. M. R. Plus 23. Temperature ranged from 96 to 104. Pulse 86 to 160. Respiration 16 to 36.

Final diagnosis: Cerebral abscess with septic thrombi in the cerebellar blood vessels and localized lepto-meningitis.

D. C. H.—Age 50—Admitted to the hospital in

an unconscious state. There is a history of a sudden collapse while dressing. Had severe headaches for three weeks. Pupils were equal and regular. No evidence of paralysis or spasms. Reflexes all present and active. Breathing stertorous, slow, foaming at mouth, pulse slow and weak. Urine, sugar four plus, acetone negative. White blood count 23,450. Blood sugar 580 mg. per 100 cc. of blood. Positive ankleclonus, positive bilateral Babinski.

Final diagnosis: (1) Meningeal hemorrhage involving base of cerebrum, pons, and medulla. (2) Arterial sclerosis. (3) Fatty degeneration and fatty infiltration of the pancreas, destruction with hyalinization of the islands of Langerhans.

M. G.—Age 70—Black—No history obtainable. It will be noted that the clot caused a compression of the opposite cerebral lobe.

Final diagnosis: (1) Massive subdural hemorrhage. (2) Chronic interstitial nephritis. (3) Fibrosis of the spleen and liver.

Post mortem and pathological examinations were made by Dr. O. A. Brines, pathologist, Receiving Hospital. Drawings by Mr. J. H. D. Ferguson.

LETHARGIC ENCEPHALITIS

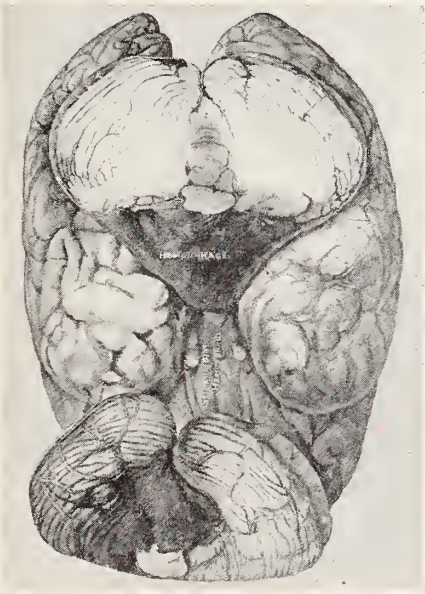
I. L. POLOZKER, M.D.

DETROIT, MICHIGAN

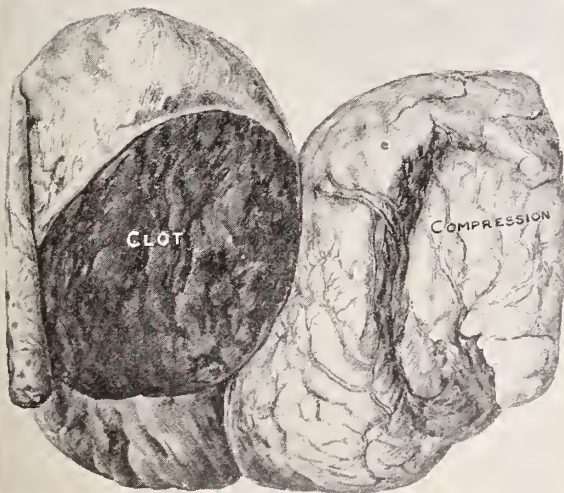
Lethargic Encephalitis has been known to exist as far back as 1712. The first description of this disease was made at that time in Tubingen, Germany, and it has been known in literature under the name "Sleeping Sickness." A condition beginning with LaGrippe, muscular pain, somnolence, diplopia, muscular paralysis of the extremities, which lasts for months, has been very well studied following the influenza epidemic in 1916 and 1917. Very little can be added to the symptomatology and pathology of epidemic encephalitis. Before discussing our own cases, I wish, however, to make a few remarks concerning Lethargic Encephalitis and the way it impresses me clinically. Some clinicians claim that Lethargic Encephalitis is contagious, which, however, I failed to observe in practice.

I have had the opportunity to observe cases of Epidemic Encephalitis together with other clinicians, in private practice, in various hospitals and have never been able to find it to be contagious. The record charts of the Receiving Hospital, in Detroit, from January 1, 1927, to December 31, 1927, show that there has been 30 diagnosed cases of epidemic encephalitis. This is, however, not the actual number of cases in this hospital.

The majority of cases in our series, are early adults. There was one case of a baby one year old, who died after eleven days of illness. There were 20 males, and 10 fe-



Basilar meningeal hemorrhage.



Subdural hemorrhage with cerebral compression.

males, in our material; 14 patients were discharged to relatives; 13 were sent to Eloise Hospital, one to Pontiac State Hospital and one to Psychopathic Hospital of Ann Arbor. The influence of hereditary factors were absent, no history of psychosis.

There were eleven cases during the same time at Eloise Hospital, all adults, all males. Four gave a clear history of having had influenza previously. In the others, a history of influenza was not obtainable and in none were there any history of insanity in the patient or his family. Eight cases are in the hospital at the present time. Three cases were improved and discharged. In the eight remaining cases, two are decidedly worse, and the condition of six is unchanged. There are, at the present time, at the Infirmary at Eloise Hospital, twenty four cases, all whites; six are women. (The cases I have seen are all white people.)

Some text books classify this disease as follows:

1. Lethargic Group (stupor, pupillary changes, ocular palsies.)
2. Hyperkinetic Group (ticks.)
3. Psychotic Group (deliriums, manias.)
4. Parkinsonian Group.

The disease is divided into acute, subacute and chronic forms. We failed to see any subacute cases in our series. The cases go right on from acute to chronic. Of course, there are a good many cases that we see later, a good many years afterwards, that show end-results of this disease and which form a group by themselves; they are put in a class which shows the post-encephalitis syndrome and of which a large group is the so-called Parkinsonian type, constituting about 75% of all encephalitis cases.

Encephalitis may follow any infection, but I am interested in those forms of encephalitis following influenza. It is surprising, in taking a history, how many of these cases have had influenza. It is true that a good many will only remember of having had fever, cold; but on thorough investigation, we find that they have all been laid up in bed with it, and from the symptoms described, it was evidently more than a cold. Usually people do not stay in bed for weeks with an ordinary cold.

ETIOLOGY OBSCURE

As to the etiology of this disease, very little is still known, in spite of all of the

contributions of Strauss, Rosenow and others. Strauss described a virus which he isolated from the nose, throat and brain washings and claims that when this virus is injected into animals it produces epidemic encephalitis. Rosenow has isolated a streptococcus from the nasal secretions, tonsils, teeth, sinuses, blood and spinal fluid in patients of epidemic encephalitis, and injected it in rabbits; he claims that symptoms similar to that in man have been produced. (There is a slowness of movements, muscular tremor, rigidity, drowsiness, and irregularity of breathing.) Others have found the virus in the spinal fluid and the brain; when inoculated into monkeys produced similar symptoms as in man.

Epidemics of hiccoughs are claimed by some to have relation to epidemic encephalitis. Rosenow also isolated a streptococcus from the nose and throat, and animals injected with it presented symptoms of lethargica. The virus of herpes, can, in rabbits, produce a disease which resembles human encephalitis. But, it is as yet, not conclusively proven.

SERUM IN TREATMENT

Rosenow has even gone so far as to make a serum and used it in cases of encephalitis; he claims some benefit.

We feel that since the first epidemic, that is ten years ago, this disease has become somewhat milder now, possibly due to the fact that the causative agent has become somewhat attenuated.

From a clinical standpoint, a relationship of influenza to encephalitis lethargica is parallel to the one of rheumatism to chorea. Because of affinity to the nerve tissue, the noxe may cause chorea without causing rheumatism first. In influenza streptococci, in some cases, have a predilection for the nervous system causing encephalitis lethargica.

As to the pathology, there are no gross pathological changes visible. Hyperemia in spots, and sometimes the entire gray substance is affected.

Histological changes: There is a perivascular infiltration with lymphocytes and round cells affecting the blood vessels of the mid-brain and basal ganglia. Hemorrhages and degenerative changes, necrosis in spots, and degeneration of the walls of the blood vessels. The chief changes are in the ganglion cells and the cortex. The virus seems to have a predilection for the central regions in the brain. (Meningo-encephalitis.)

SYMPTOMS

The disease comes on in many ways, the first symptom depending upon the initial site of the lesion. Usually the onset is relatively sudden; headache, sometimes vomiting, general malaise and fever. In children, there are sometimes signs of meningismus, diplopia and sleeplessness, which gradually progress to somnolence leading to lethargia. Patient sleeps constantly, but can be aroused. Ask him a question, he may answer it, and go right on to sleep; always complains of feeling tired. Ptosis, diplopia, increased salivation, nystagmus. During the acute stage in the delirium, I have seen the patient talk continually, usually about business affairs, transacting business with very brisk commands, as in one case a business man giving orders, selling certain things. Their business seems to be on their mind and their general life is expressed in the delirium. Very often, so maniacal that they have to be restrained in bed.

The disturbance of sleep may take on the form of insomnia, or a reversal of sleep. Insomnia at night, sleepy by day.

A symptom noticed often, in a few of our cases, was a forced upward movement of the eyes, which were fixed towards the ceiling; during this attack the patient cannot close his eyelids, or move his eyes in any other direction. Sometimes this may be a downward stare or a lateral, and may last from a few minutes to several hours. The patient has to close his eyes with his hands.

During this attack the pupils do not react to light or accommodation and at the end of the attack the eyeball is inflamed and there is a slight secretion formed. This movement of the eyes may be upward, downward or lateral. We see cranial nerve paralysis, with predominating of the seventh nerve. Encephalitis patients may have different forms of muscular spasms like for instance, the head bending forward and sometimes the whole body. Great difficulty in getting up when he is sitting or laying down, and in fact a great difficulty in getting started in all his movements, and even in his speech. If a sharp command is given him, he will try quickly to follow your command, to get up or say something, but he immediately slows down or stops until another command is given. Sometimes the patient is in a state of immobility, only trying to do something when he is sharply asked to. He is drowsy, constantly fatigued, speech is slow, drooling

of the mouth, difficulty in breathing; the patient cries easily, has a masked like face, exhibits anxiety, and pleads for help. There is a state of rigidity, and hyperaesthesia of arms, legs, and immobility of all of the extremities. One cannot fail to notice, when watching a chronic encephalitic patient, how much he resembles a person of old age or one of general senility.

ENCEPHALITIS IN THE AGED

We have in old age, loss of memory, inhibition of ideas, loss of ability to grasp events; shaking, and a downward tremor of the head, a general tremor of other extremities, slow movement in getting up or sitting down, drooling from his mouth. Dreaming and drowsy by day. Sleepy anywhere or any place, and often complaining of insomnia at night. Loss of fine movements of the extremities, which are especially noticeable when he eats or dresses himself.

My attention has been called to the fact that even bedridden patients can do things the first thing in the morning on awakening, for themselves, like dressing, etc., without any difficulty or tremor which they cannot do later in the day. This lasts only from fifteen minutes to one-half hour when they fall back into the old condition. It has also been noticed that these patients can run on command, very fast, without stopping. We had them running in a long corridor in the hospital, so fast that one could hardly keep up with them, and stop instantly when ordered, getting out of other people's way and seemed to hold their heads erect.

The micro organism which causes this disease may lie dormant for a long while, then flare up suddenly. This is noticeable in the Parkinsonian type, which description comes to us from the French writers; it resembles paralysis agitans of old people. But, encephalitis is usually a disease of young adults. The tremor is coarser and the distribution more limited. They often have difficulty in speech; drooling of the saliva, and a tendency to hiccoughs. The residual effects in these cases are, facial tick, clicking noises of the tongue, and also certain residual paralysis. Respiratory disturbances, diabetes insipidus, other metabolic disturbances are often present. The blood sugar curve is disturbed in encephalitis, showing disturbances of sugar metabolism. The sugar curve and colloidal gold in the spinal fluid is high, in the acute cases. The examina-

tion of the spinal fluid of our cases, shows the colloidal gold and sugar curve normal.

PSYCHOSIS IS NOT A SEQUELLA

We do have patients presenting a picture of absent mindedness, forgetfulness and even sometimes showing hallucinations of a religious character or delusions of persecution or other psychopathic changes, but this is only transitory. The patient may have a lack of attention, but not of memory.

In children this lack of attention, restlessness, over production or slowing down of impulses is becoming quite a problem in our schools. It is highly probable that the delinquency of a good many children of school age is due to the end results of encephalitis. We note the work that is being done in Philadelphia, reported by Dr. Bond, where this problem came up very acutely.

As to the treatment, we have all tried hyoscin and temporary improvements noticed; especially the tremor. Personally I have gotten just as good results from belladonna, using it in large doses from 20 to 30 drops three or four times a day. This tremor has been reduced materially and the patient more or less quiet; injections of sterile milk, iodine, nicotine and autogenous serum have been also used, but without any results.

Recently we began to use Ringer's solution which we inject warm (105° Fahrenheit) into the buttock or back, alternating each side 1000 C.C. twice weekly. Ringer's solution, or as it is called, the Ringer-Locke solution, contains in 1000 parts of distilled water:

Sodium Chloride.....	9.0	parts
Potassium Chloride	0.42	"
Calcium Chloride	0.24	"
Sodium Bicarbonate.....	0.1	"
Glucose	0.1	"

This solution has been used at St. Luke's Mental Hospital at Middlesborough, by Dr. John P. Steel in toxic psychosis. They have noticed improvement in the physical condition of the patients and a good deal of mental improvement. Our reason for using this Ringer's solution in chronic Lethargic Encephalitis is, because we feel that there is a toxicity, and whatever virus may be the etiological factor of this disease, it is probably present in the nerve tissue, just as the *Spirocheta pallida* is present in tabes, dorsalis, and general paresis.

We also feel that there is a great deal of hysteria associated with chronic encephalitis and many of the symptoms presented in this disease may perhaps account for it. The value of the injections is also partially of psychic nature.

There were no ill effects from the treatment. Temperature, pulse, and respiration were taken two, four and six hours after each injection. The temperature, two hours after the injection, went up to 101, 102 F. in some cases; the pulse ranged from 120 to 125 in all the cases. Just what benefit can be derived from this solution, I am not prepared to say. Time shall show how durable and successful this treatment is.

So far, we have been able to notice out of our 10 cases treated the following: Three of them, (moderate cases) recovered almost completely, the tremor has disappeared, speech and writing normal, walk steady and firm; no salivation and perspiration. Maskface is hardly noticeable; smile is normal. Two other cases, (severe) which were bedridden and helpless are up and walking around, appear very cheerful. One who slept constantly every time we used to come into the ward is up in the ward, asking when the next injection is going to be given to him, while previously he was indifferent to the treatment.

The four other cases were considerably benefited by our injections and subjectively feel very well.

NOTE—Read with presentation of cases before the Detroit Society of Neurology and Psychiatry at the Eloise Hospital, April 12, 1928.

TUBERCULOUS TRACHEO-BRONCHIAL ADENITIS

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Recent medical literature has contained much reference to "hilum tuberculosis". The committee of the American Sanatorium Association in 1924 recognized "Hilum Tuberculosis" as a diagnostic term. The hilum, however, is a space and not a structure. Therefore, "tracheo-bronchial adenitis" has, in this paper, been substituted for the term "hilum", since the tracheo-bronchial glands are definite anatomical entities and may be affected by disease. This group of glands is made up, according to Stoll, of three smaller groups, namely: (1) the tracheal glands, surrounding the trachea, in direct relation with the

superior vena cava, the pneumogastric and the recurrent laryngeal nerve, (2) the glands at the bifurcation of the trachea in relation with the pneumogastric nerve, the pericardium and the esophagus, (3) the hilum glands along the bronchi. This last group according to Stoll is the most frequent seat of caseation and calcification. Clinically, it is impossible to determine which of these three divisions is involved. Therefore the term "tracheo-bronchial adenitis" will include all three groups.

All enlargements of the tracheo-bronchial glands are not due to tuberculosis. Nobecourt places a large share of the blame upon adenoids. Bernard and Vitry include tonsillitis, measles, whooping cough and appendicitis as causes of such glandular enlargement. In addition to these, sinusitis, Hodgkin's disease, neoplasms, aneurism, certain congenital hear lesions, especially a patent foramen ovale, and an abscess from a thoracic Pott's disease may produce signs and symptoms simulating tracheo-bronchial adenitis. The enlargements due to acute conditions such as those mentioned above, rapidly subside, as a rule, so that at a subsequent examination all signs of enlargement may have disappeared. When the signs and symptoms persist, tuberculosis must be suspected.

The frequency of infection with tuberculosis in children has been estimated by many observers. The following percentages of positive tuberculin tests in children were found: Hamburger¹ in Vienna 94%, Calmette¹ in Lithuania 87%, Mioche¹ in Paris 82.7%, Fishburg¹ in New York 80%, Slater² in Philadelphia 80%, Fergusson³ in Saskatchewan 56.6%, Furstner-Risselada⁴ 20% up to seven years and increasing to 50% by the thirteenth year. Pieser⁵ in Germany 56%, Czerny and Moro⁶ 60%, Armstrong⁷ in Framingham 54% at seven years of age. In the rural districts of Minnesota, Slater² found only 10%. In children under two years of age the percentages are much lower and more consistent. For this group McLean and Jeidell⁹, in New York, obtained 10.5%, Parisot and Saleur¹⁰ in Nancy, France, 13%, Sander¹¹ in Dortmund, Germany 15%, Myers and Magiera¹² in Framingham 15%.

TYPES OF TUBERCULOSIS

Chadwick¹³ divides tuberculosis of childhood into three types according to the age of the child: (1) General or infantile type, occurring from birth up to five years of age, with the most dangerous period from birth to two years of age. (2) Hilum

or juvenile type, occurring from five years up to twelve years of age. (3) Adult type, occurring from twelve years onward. This division into age groups is well recognized and is shown in the children under our care. The second and third groups of this classification comprise only the intra-thoracic forms of tuberculosis. Bone and joint tuberculosis may attack any age; peritoneal involvement occurs most frequently in the child or young adult; cervical adenitis accompanies, most frequently, the second division of Chadwick's classification and intestinal tuberculosis is most frequently the sequel of pulmonary involvement.

Referring to the records of this sanatorium, we find that of 426 children up to 15 years of age admitted to the sanatorium, 51.8% were diagnosed tracheo-bronchial adenitis, 12.4% pulmonary tuberculosis, 14% bone and joint tuberculosis, 1.1% peritonitis or enteritis, 3.8% generalized tuberculosis, 1.4% cervical adenitis, 11.5% some non-tuberculous condition. This will give some definite idea of the percentage of children who fall into each of Chadwick's groups. It will also show the great preponderance of tracheo-bronchial adenitis. Fifteen and four-tenths per cent of the pulmonary group were less than 5 years of age, and 8% of the tracheo-bronchial group; 44% of the generalized tuberculosis group were infants.

TRACHEO-BRONCHIAL ADENITIS

This paper is mainly concerned with tuberculous tracheo-bronchial adenitis. A definite diagnosis of the condition is difficult to make and many children have been so labeled because of an inability to account in any other way for their symptomatology. Opie¹⁴, McPhedran¹⁵, Rathburn⁸ and many others have emphasized the importance of tuberculous disease of these glands. Opie says that "tuberculous tracheo-bronchial adenitis is an indication of a severe infection and such infection may not only be carried to the lymph nodes but may also remain latent in the lungs and develop after the glandular disease gives evidence of healing." In a later article, Opie in conjunction with McPhedran says "tracheo-bronchial lesions are important because they indicate a severe infection and children in whom such lesions occur are liable to develop diffuse pulmonary lesions." The complications which may accompany or follow this adenitis are a further proof of its seriousness. A rupture of a caseous gland may produce

a bronchial spread; tuberculous bronchopneumonia may develop with extensive signs, yet with low fever; epituberculosis¹⁶ characterized by the occurrence of an extensive pneumonic consolidation in a child with tuberculous tracheo-bronchial glands or other relatively mild manifestations of the disease may occur. Hemoptysis and spontaneous pneumothorax never result from disease of the glands, but are more common as a result of caseous pneumonia, which in itself, may result from a spread of the disease from the adenitis. Hemplemann¹⁷ says that "rupture of a caseous lymph node into a bronchus or the trachea may cause severe asphyxia or even death." Poynton¹⁸ and Williams have reported a case where death occurred from blocking of the air passages by a caseous gland.

There has been much discussion as to whether the pulmonary focus or the glandular focus is the primary lesion. Wollstein¹⁹, Jousset²⁰, Barjon²¹, Laroux²², and Honeij²³ believe the primary focus is in the glands. Honeij says "any involvement of the hilum region, whether lymphatic, pleural, glandular or otherwise, may indicate either a pre-pulmonary tuberculosis or an early pulmonary lesion." Overend and Bebert²⁴ say that the parenchymal lesion may develop gradually by infiltration from the hilum. Lapham²⁵ looks on the bronchial glands as the primary chancre of infection, the bacilli being transported from the glands to the lung.

This opinion has not been accepted by many. Parrot²⁶ said "there is no bronchial adenopathie which has not a pulmonary origin," and further, "the primary lung foci in children are practically always accompanied by tuberculous changes in the lymphatic glands adjoining the lungs." Kuss's opinion was also in favor of the primary lung focus. Ghon²⁷ elaborated Kuss's work and reported that he found a primary pulmonary focus in 95% of his cases of venous angle lymph node tuberculosis. In a later communication, Ghon referred to 41 cases, in 38 of which he found a primary lung focus. In 29 of these microscopic tuberculous changes were found in the lymph nodes of the broncho-mediastinal lymph drainage, which extended to the venous angle. Ghon also showed that "alterations in the lymph glands were never absent in children on the side of the lung focus." Blumenberg²⁸, Canti²⁹, Tenderloo³⁰, McPhedran, Lange³⁰, Schurmann³¹, Hedrin³², Naesland³⁴, and Czerny³⁵ are all agreed that the

primary focus is in the parenchyma of the lung.

LESION SHOWN BY X-RAY ONLY

Pulmonary lesions are frequently present at the same time as a tracheo-bronchial adenopathy, though the pulmonary lesion may be so small that clinical examination fails to demonstrate its presence, and only on the X-ray plate is its presence shown. In practically every case where a diagnosis of tracheo-bronchial tuberculous adenitis has been made at this sanatorium, there has been some evidence of a previous pulmonary lesion either in altered breath sounds or by the presence of strands of fibrosis leading from the parenchyma of the lung to the tracheo-bronchial glands (as shown on the roentgenographic plate). In one case in particular, the X-ray plate showed the path taken by the disease from the primary focus near the pleura to the hilum. The primary focus showed as a well defined clear cut shadow, and interspaced between it and the hilum were several shadows suggesting remnants of previously enlarged lymph nodes. The tracheo-bronchial glands, in this instance, were much enlarged and apparently partly calcified; the enlargement was sufficiently great to produce clinical signs. In many cases no evidence of fibrosis could be made out, by the roentgenologist, but the primary pulmonary focus was sharply outlined. The weight of evidence brought out not only by the work done in this sanatorium, but also by the work of others which has been quoted, seems to prove that the primary focus is in the parenchyma of the lung and not in the tracheo-bronchial glands.

DIAGNOSTIC FINDINGS AND SYMPTOMS

The American Sanatorium Association Committee in its report in 1924 accepted the following findings and symptoms as diagnostic of tuberculous tracheo-bronchial adenitis:

(1) Symptoms:

- (a) local: colds, cough, hoarseness (rarely loss of voice).
- (b) constitutional: fatigues, lassitude, nervousness, anorexia, normal or subnormal weight, poor posture evidencing the poor muscle tone due to fatigue, sweating (excessive sweating from slight cause, not usually night sweats) temperature 99.6 to 100.5. The presence of such local conditions as phlyctenular

keratitis or conjunctivitis as evidence of poor general physical condition.

(2) Physical signs:

- (a) percussion: paravertebral or parasternal dullness.
- (b) auscultation: rales usually are due to other causes than hilum tuberculosis so very little of positive value may be elicited.

(3) X-ray: one or more of the following:

- (a) prominent bronchial trunks, with beading or nodular formations, extending from the hilum.
- (b) enlarged lymph nodes, embedded in thickened tissues of the hilum.
- (c) diffuse shadows of varying densities throughout the hilum.

(4) Tuberculin test positive.

(5) In making a diagnosis all other causes of similar symptoms and signs must be ruled out.

To these five points may be added three more: (1) a history of exposure to tuberculosis, (2) anaemia and (3) D'Espine's sign. In the event of all these eight points (history of exposure, malnutrition, loss of weight or a failure to gain weight, anaemia, elevation in temperature (low grade, especially the afternoon temperature), positive tuberculin test, X-ray findings and physical signs) there is little question of the correctness of the diagnosis. But it is seldom that even a majority of these points is present. Kennan Dunham accepts three of these signs as sufficient, namely: (1) X-ray, (2) impaired paravertebral resonance, (3) D'Espine's sign. If in addition there is a history of exposure to tuberculosis, that determines the diagnosis in his mind. If low grade elevation of temperature, rapid pulse, loss of weight or failure to gain weight, and a history of exposure are present, in the absence of the three signs mentioned above, Dunham labels the patient "potentially tuberculous" and advises that the child be admitted to a preventorium. Most tuberculosis pediatricians agree upon the acceptance of any five of the eight points as being sufficient.

The various points will next be considered in detail:

History: Fraser³⁶ and McRae believe too much stress has been laid upon the history of exposure to infection; that a negative history does not exclude tuberculosis as the cause of symptoms. The oppor-

tunity for exposure is so great in the average community that direct exposure can hardly be said to be necessary.

MALNUTRITION NOT RELATED TO T. B.

Malnutrition: Hetherington³⁷ denies that malnutrition in underweight children has any relationship to tuberculosis. In his series of 1,999 children between five and sixteen years of age, 72.5% of the overweight and 71.5% of the underweight children reacted to 0.1 mgm. of tuberculin. In the summer camp work at this sanatorium we have placed all children who are 10% or more underweight in the malnutrition group. In the past two years full data have been kept on these children and of the 400 who have passed through the camp during this period, 372 have shown a combination of findings which may be of interest. Of these 372 children, 239 were 10% or more underweight on admission. Of this number, 183 reacted to less than 0.1 mgm. of tuberculin; while the remaining 56 failed to react. Eight of the 372 were above normal weight and did react to tuberculin, 125 were less than 10% below normal weight and of these 96 reacted to tuberculin and 29 did not. These figures show that very little diagnostic value can be placed upon malnutrition. Approximately three times as many reacted to tuberculin as did not, both in the malnutrition group and in the group classified as normal. The fact that there were almost twice as many children of the 372 who were in the malnutrition group as there were "normal" weight children may be dismissed, since these children were selected through the Department of Health of Detroit because they were either below weight, or because of the history of exposure to tuberculosis along with other significant symptoms which warranted their being placed in the camp.

Fraser and McRae³⁶ lay more stress upon the failure to gain properly than upon actual underweight. Failure to gain properly may be in part due to home conditions. In this connection it is interesting to note that the gain in weight of the children in the summer camp has been 5.71 pounds in seven weeks on an average in the past five years, showing that under proper surroundings and good food these children will return to almost normal weight in a comparatively short period of time. Some of these children have gained as much as 24% in weight during the seven weeks of their stay in the camp.

Anaemia: While every author speaks of anaemia as one of the criteria upon which to base a diagnosis, no definite statistics upon the question have been found. The hemoglobin percentage in children between five and twelve years of age is normally about 20% below that of adults. Analyzing the figures for the camp and also for the children's division of this sanatorium, the hemoglobin percentage of the children on admission is found to average about 75%.

Temperature: McPhedran¹⁵ states that "fever, indicated by a slight abnormal elevation of temperature is an uncertain guide in children for the regulatory mechanism is either incompletely developed or extremely sensitive, so that trivial and obscure causes may produce fever." Morse believes that "tuberculosis is the least probable cause of continued fever in children." Cantien³⁸ cautions that "latent fever may be due to non-specific infection of the glands as shown at autopsy." The statements of these men will readily be accepted by any one working with children and who has seen acute elevations of temperature in children from benign causes. As an instance of this, reference may be made to one of the children in the children's division here. This child's temperature rose to 106° and physical examination failed to show any cause for this extreme elevation in temperature other than an acute follicular tonsilitis. Twelve hours after commencing treatment the temperature had fallen to normal and has not shown an elevation of more than a part of a degree since. In considering the condition on admission of the children who are, at present, patients in the sanatorium, we find that 85% did have some fever upon admission.

HUMAN AND BOVINE TUBERCULIN

Along with the question of temperature, must be considered the pulse rate; 80% of these same children had an increased pulse rate.

Hempleman¹⁷ advises the use of both human and bovine tuberculin as a routine.

Some of the children will react to human, some to bovine, and some to both human and bovine. In our work here we have limited ourselves to the routine use of human tuberculin and have made use of the intradermal method. This method assures a better controlled dosage and the reactions can be interpreted more uniformly. While the majority of children over twelve years of age react to tuberculin, as

was mentioned in the opening statements, the intensity of the reaction showed marked variations, some showing only a slight erythema, others induration and vacule formation, with the induration and erythema extending from 40 to 60 mm. in diameter. McPhedran¹⁵ says that a "marked reaction to 0.01 mgm. of tuberculin in a child under five years of age is sufficient to warrant therapeutic and preventive means even in the absence of a demonstrable lesion.

In conjunction with the tuberculin tests, many are now using complement fixation tests. Gugelot³⁹ places great stress upon the shifting of the nuclei of the neutrophil leucocytes. He says that an increased spread of sedimentation plus a shifting of the nuclei is most significant and was present in 80 out of 95 patients with active disease, and never present in those with inactive disease. It is his belief that the shifting of the nuclei is due to the infection and that its presence shows activity still present. The increased sedimentation rate, on the other hand, is due to pathological destruction of the blood cells, in his estimation.

X-RAYS HAVE SET NO STANDARD

X-ray: Hawes⁴⁰ has not seen any evidence that roentgenologists have settled upon any standard in the interpretation of root shadows. McPhedran⁴¹ notes "that frequently in the presence of a slight apical lesion, a more definite infiltration in the upper part of the lower lobe or in the anterior lappet of the upper lobe, gave a roentgenographic appearance sometimes described as hilum tuberculosis. He also doubts the value of the X-ray in early lesions." Only when calcium infiltration of a necrosed area was present was there any distinctive shadow—a protrusion of the mediastinal wall beyond the shadow of the spine and sternum by caseous lymph nodes is rare except in fatal infantile cases. De la Camp⁴² has said the X-ray diagnosis of Tracheo-bronchial glands is the most difficult of all roentgenographic work, only calcified glands giving a clean cut picture. Calcification, however, may require as long as four and one-half years to develop (McPhedran¹⁵) or may appear as early as six months (Geipel⁴³). Schurmann³² reports a case of petrified glands at nine and one-half months of age and says that calcification of a caseated area may not occur for as long as four years. Sulka⁴⁴ and Stoll⁴⁵ describe the hilum shadow as extending from the anterior tip of the

third rib to the sternocostal junction of the first rib, and laterally for various distances on the right. This shadow may bulge into the region of the inner aspect of the lung. Nagel⁴⁶ recognizes that the shadow of swollen and cheesy glands is less clear and may not be decognized. Kramer⁴⁷ describes the eaten out appearance of the shadow as being due to blood and lymph vessels. Fraser³⁶ and McRae also believe the hilum shadow may be due to lymph nodes or to bronchial tubes, blood vessels or connective tissue. Felix Baum⁴⁸ has called attention to the interspace between the heart and the hilar shadow, which is normally clear, but in the presence of enlarged tracheo-bronchial glands becomes clouded or even dense. Burns and Myers⁴⁹ emphasize the value of serial plates showing a persistently enlarged hilum, and in this connection Honeij²³ draws attention to the change of the X-ray shadow from time to time, during the course of the disease the tendency being for a large soft shadow to become progressively smaller and denser. In the same article he says: "In certain cases of tuberculosis, especially the peri-bronchial type, the hilus shadow enlarges progressively to a certain point and then contracts and becomes denser." Minor⁵⁰ in 1919, gave a very excellent description of the fluoroscopic picture of enlarged tracheo-bronchial glands.

PHYSICAL FINDINGS AND X-RAY

During the past two years we have made a practice of frequently comparing the physical findings with X-rays. In several cases the small, indefinite, hilum shadow has been seen to grow progressively larger, becoming more fleecy in outline and appearing almost to melt into the parenchyma. Later this shadow receded, became denser, even showed evidence of calcification, leaving behind its receding edge, in the parenchyma, fine strands of fibrosis which may be interpreted as proof of parenchymal invasion. This parenchymal infiltration may have been a manifestation of a secondary infection with tuberculosis rather than the result of a spread from the gland, and may have co-existed with the glandular infection, and have been overlooked owing to the enlargement of the glandular shadow overlying and obscuring the roentgenographic evidence of the parenchymal involvement.

Tuberculosis is not the only cause of enlargement of the tracheo-bronchial glands. How may the shadows cast by enlarged glands due to other causes than

tuberculosis be differentiated? McPhedran¹⁵ says that "large succulent, intrapulmonary, nontuberculous glands due to acute infections did not throw shadows which would cause confusion with tuberculous disease. In the case of extrapulmonary glands, glands containing soft, fresh caseations due to acute, rapidly advancing infection, were similar in density to non-specific edematous nodes, and were distinguishable only if they became large enough to bulge out the silhouette of the areolar mantle." Tuberculosis however, is the only disease which will produce caseation followed by calcification. Therefore, in the presence of calcification the diagnosis may be made with certainty.

INSIDIOUS ONSET

Schlossman⁵¹ comments upon the insidiousness of the onset and especially upon the lack of change in the general physical condition. This, he states, is characteristic of tracheo-bronchial lymph node tuberculosis. McPhedran⁴¹ says "there are no symptoms due to uncomplicated tracheo-bronchial tuberculosis which has not extended beyond the capsule of the lymph node." However, in most of these children there are symptoms which will cause us to suspect disease and attempt to rule out tuberculosis.

The following symptoms were emphasized: Poor or capricious appetite (Schlossman⁵¹, Hemplemann¹⁷); irritability, morning languor and fatigue (Von morning languor and fatigue (Von Ohlen⁵²); irregular fever otherwise unexplained and of a low grade (Anderson⁵³); pain of indefinite origin in the chest on deep breathing or after vigorous exercise (Dautwiz⁵⁴); and pain in the mammary region (Kramer⁴⁷). Pleural pain is infrequently complained of by children even when there has been extension of the disease to the pleura (Hemplemann¹⁷). Cough has been mentioned by many authors (Ohlen⁵², Mackenzie⁵⁵, Lowman⁵⁶, Marfan⁵⁷). It is described as brassy in character. MacKenzie states that the cough is incited by stimulation of terminal filaments of the superior laryngeal nerve, a branch of the vagus. The vagus is sensory below the superior branch, and continued pressure by glands may cause hypersensitivity and cough. Lowman says the cough is due to collateral inflammation of the bronchi in children with tuberculous glands, is recurrent in winter, persists and later gives rise to fine moist rales. Marfan says the bitonal cough in infancy is always

diagnostic of tracheo-bronchial tuberculosis and is the result of tracheal compression. Von Ohlen speaks of night sweats and anaemia, but Hemplemann states that night sweats are infrequent in children. While night sweats have occurred in our series of cases, they have practically always occurred in children in whom the disease was no longer limited to the glands. Excessive sweating, without apparent cause is more frequently seen and is, rather than night sweats, to be inquired after in the history. Hemoptysis is a rare occurrence in children (Hemplemann) and is seen only in the presence of a parenchymal lesion. Clubbing of the fingers is seldom if ever seen in tracheo-bronchial tuberculosis and where it is present speaks more for a congenital heart lesion (Hemplemann). Von Ohlen points out that there may be a retardation of as much as two or three years in the growth of these children. This excessive retardation has not been observed in the majority of cases, though lesser degrees of retardation have been noted.

DIAGNOSIS, WHEN RECOGNIZED

Diagnosis: According to Opie and McPhedran¹⁴ tracheo-bronchial lesions are recognized only when the infection has been intense and prolonged. Norris and Landis⁵⁸ admit that the physical signs are quite as inconclusive as the symptoms.

In the 1921 English translation of his book, Much⁵⁹ has given the following outline for the diagnosis of tracheo-bronchial tuberculous adenitis:

(a) general complaints — exhaustion, emaciation, digestive disturbances, catarrhs, shortness of breath, palpitation, pallid appearance, weakness, lack of appetite, irritability, profuse perspiration, changes in the child's nature (mental and physical—such as a tractable child becoming stubborn, etc.).

(b) irregular, low grade fever, frequently appearing only in the afternoon.

(c) history of measles, whooping cough or influenza. During and immediately following these diseases, the antibodies against tuberculosis are diminished or disappear entirely, as evidenced by the Von Pirquet reaction. In the case of influenza, he believes the tubercle bacilli in the glands are reactivated. Pleurisy is also indicative of tuberculous infection.

(d) cough; may be absent, catarrhal, metallic or whooping in character, and in the last case the condition may be, and

has been mistaken for whooping cough and the underlying cause overlooked. Difficult breathing and rattling during expiration may also be present.

(e) D'Espine's sign—Much gives the following levels as the limit for the different ages;—seventh year, 7th cervical vertebra; eighth year, 1st thoracic; eight to twelve years, 2nd thoracic and up to the fifteenth year, to the 3rd thoracic vertebra.

(f) percussion of the vertebral column.

(g) X-ray.

To these Norris and Landis⁵⁸ add, engorged veins over the upper chest, dulness of the 1st and 2nd interspace close to the sternum and vertebrae, most marked on the right side. Eustace Smith⁶⁰ sign;—a venous hum at the root of the neck over the sternum, which is quite common in healthy children of stubby stature and short necks.

Dautwiz⁵⁴ says "the child may be frail or robust; the condition may hide back of the rosy cheeks of a happy contented child who is kept in good physical condition." Fifty per cent of children showing dilated veins over the anterior thorax react to tuberculin. Slight puffings of the face and eyelids from venous obstruction may be present. There may be a slight inequality of expansion in the apices. De la Camp⁴² mentions that the Adam's apple may be stationary. Stoll⁶¹ refers to what he calls a "Hilum dimple."

On palpation, there may be tenderness over the manubrium sterni and at times at the sterno-costal junction. This is suggestive of active bronchial adenitis according to Petruschky⁶². This tenderness is more common over the spines of the upper vertebrae and due to periosteal irritation, according to the same author. Backache in the interscapular region is complained of early in adenitis, but advanced cases do not complain of this backache. Seventy-seven out of 79 of Petruschky's cases complaining of backache, reacted to tuberculin. MacKenzie⁵⁵ says that tenderness over the 1st, 2nd, 3rd and 4th thoracic spines rather indicates the heart as the seat of the trouble; whereas, when the tenderness is over the 4th, 5th, 6th, 7th and 8th thoracic spines, the stomach is more likely to be at fault.

Dulness over the manubrium sterni is of little use, since the thymus, persisting usually to the sixth year, may even persist to the twelfth or thirteenth year, and may produce dullness, according to Dautwiz⁵⁴. Spinal percussion is of value according to

Auenbrugger⁶³, Ewart⁶⁴, Von Korany⁶⁵, and DeCosta⁶⁶. De la Camp⁴² after extensive investigation accepts spinal dullness as of much value in the diagnosis of enlarged bronchial glands. Normal dullness extends to the 4th thoracic vertebra, according to these authors; below that level it indicates mediastinal tumor. Nagel⁸⁷ shows that even so small amounts of wax as 15 cc. injected into the cadaver in this region produce dullness and he attempts to show that the dullness is due, in the living, to lessened pulmonary resonance owing to the enlarged glands pushing the lung aside. Kramer⁴⁷ says paravertebral dullness may be increased either unilaterally or bilaterally and may be unequal, due to engorged blood vessels, lymph vessels and from glandular pressure. In his estimation the dosage of tuberculin, in treatment, should be influenced by the size of this dullness. Gittings, Lathrop and Anderson⁶⁸, in examining sections of frozen bodies, found the lungs to be separated two to three cm. in children, and claim the paravertebral dullness is due to this separation. Bing⁶⁹ attributes the dullness at the right apex to bronchial glands, not, as Kronig⁷⁰ says, to upper respiratory disease, since the greater number of bronchial glands is on the right side. Others contend that a sense of resistance to the percussing finger, rather than impaired resonance, is diagnostic.

VALUE OF VOICE SOUNDS

D'Espine's sign has been much discussed. De la Camp⁴², says that the bronchial character of the voice sounds may be absent over the upper thoracic vertebra, but present at the 5th thoracic and below. In eliciting this sign he uses the count 1-2-3, and emphasizes the prolongation of the final E. This prolongation is normally found over the trachea. Gray⁷¹ draws attention to the post-phonal quality of the spoken voice and to a splitting of the syllable. He also notes that the bronchial quality of the note may be lost if the stethoscope is moved to either side, and agrees with de la Camp, that the bell of the stethoscope must be applied directly over the vertebra. If the bronchial quality of the spoken voice does persist to the side of the vertebra, it may closely simulate the sounds heard over a cavity. Should the vocal resonance over the vertebra suddenly become distant, while above and below the vocal tone is full and resonant, it designates a softened gland, according to Gray,

since a softened gland is a poor sound conductor.

The Committee on Study of Normal Chests in Children⁷² stated that D'Espine's sign is of doubtful value. McPhedran⁷³ shows by clinical and X-ray studies that D'Espine's sign bore no relation to the presence of tuberculosis of the mediastinal lymph nodes, recognizable in the X-ray, by calcification and infiltration, even when the size of the shadow reached 3.5 by 2.5 cm. The determination of a diminution of resonance in the inter-scapular region requires such nicety of technique that even masters of percussion disagree as to the presence or absence of significant findings in this region of the chest.

Laennec⁷⁴ is quoted as saying "In persons, however, of delicate and feeble frame, particularly lean children, there frequently exists in this (the interscapular) situation a bronchophony very similar to the laryngophony already noted." Anderson⁷⁵ thinks the seventh cervical vertebra is much too high a point at which to seek the changed voice sounds. He also says the whispered voice over the spines is not a definite sign of tuberculosis, and places great value in interscapular dullness, which, while difficult to elicit, is, according to him the better diagnostic sign.

C. L. Minor⁷⁶ stresses the presence of a sibilant inspiratory sound transmitted downward to the lower level of the trachea, rather than the changes described by D'Espine. Hetherington³⁷ has found a positive D'Espine's sign, paravertebral and parasternal dullness, and vesiculo-bronchial breathing in the interscapular region in normal children.

So much for D'Espine's sign, and impaired resonance in the inter-scapular region. Grancher finds that weakened inspiratory breath sounds at the apex, due to bronchial gland disease, antedates bronchophony. Eustace Smith⁶⁰ in describing the venous hum which has been given as one of the signs for tracheo-bronchial adenitis, admitted that this hum was especially common in short necked children, although uncommon after the thirteenth year. In his original article he said the sign was due to pressure on the left innominate vein by enlarged glands at the lower end of the trachea.

Miller and Woodruff⁷⁷ described crepitant rales in the fourth, fifth and sixth interspaces in the mid-clavicular line in cases of hilum enlargement. Hemplemann¹⁷ says that "one primary bronchus may be so compressed as to produce absence of

breath sounds in that side, simulating a foreign body in the bronchus." He also speaks of prolonged expiration, increased voice sounds, especially whispered voice, harsh breathing or broncho-vesicular breathing, or even tubular breath sounds over the apices. If the glands are greatly enlarged, pressure on the vena cava may produce cyanosis or edema of the face, according to Hemplemann and there may be stridor with dyspnoea, simulating croup, asthma, or enlarged thymus. This author also calls attention to the expiratory whoop or stridor seen in infants with enlarged tracheo-bronchial glands. This stridor is also referred to by Schick⁷⁸ who thinks it is produced by pressure upon the bronchus. However, this last statement is offset by McPhedran's⁴¹ findings. "Neither in post-mortem material nor in the living, have we seen evidence that tuberculous tracheo-bronchial enlargements may give rise to mechanical stenosis."

Several conditions were mentioned earlier in this article which must be considered in differential diagnosis. The final diagnosis of tracheo-bronchial adenitis due to tuberculosis can be made only after ruling out the above conditions, and applying of the various confirmatory tests. Opie and McPhedan¹⁴ have said that it takes an average of four and one-half years after exposure to produce calcification in the glands and that therefore an absolute diagnosis of tracheo-bronchial adenitis cannot be made in any child under five years of age.

FINAL RESULTS AND PROGNOSIS

At the present time a paper is under preparation dealing with the final results and prognosis in the children who have passed through this sanatorium. J. A. Watt⁷⁹ in 1924 gave his results in 117 children followed from 1918 to 1924. Out of 117 children diagnosed as having had tuberculous tracheo-bronchial adenitis, only one was dead, and 97 were quiescent or improved in 1924. Forty-eight per cent of these children had had tubercle bacilli in their sputum. The majority of children with uncomplicated tracheo-bronchial adenitis cough very little and do not raise sputum. Whether positive sputum might be found in these children by artificial stimulation of coughing, and the gathering of the sputum so produced on applicators, has not been tried in this sanatorium. The staff of this sanatorium does not believe that it is possible for tubercle bacilli to be present in the sputum in purely glandular

cases, and further, that where positive sputum has been present, is convinced that either a rupture of a caseous gland has occurred or that there is some active pulmonary involvement present, from which the bacilli are shed. The prognosis of these cases will depend in a large part upon the condition of the patient at the time of diagnosis. The adenitis, in itself, is benign, but if it is permitted to progress, may become a matter of great concern. Kramer⁴⁷ has put forward evidence to suggest that a tuberculous infection may die out so completely as to leave no evidence of its former existence even by cutaneous tuberculin tests. In 1919, Krause⁸⁰ referred to an Italian boy of fourteen years of age whom he had observed since 1909. At that time he had multiple lesions of the bones, glands, peritoneum, and also phlyctenular conjunctivitis and positive lung findings. He reacted, at that date, to 0.00001 mgrms. of tuberculin. In 1917 he was tuberculin negative, showing signs of a clinically arrested disease. When examined again in 1918 he was still tuberculin negative and showed no evidence of activity anywhere. On the other hand, we have all seen cases discharged from sanatoriums as quiescent, return to the sanatorium, even after very short periods outside, with an extension of the disease and involvement of the parenchyma of the lungs.

Of the 90 children in the children's division of this sanatorium, there are, at present, 20 who have been diagnosed as having tuberculous tracheo-bronchial adenitis. A short resume of the history, symptoms, X-ray and clinical findings of a few of these children will be given in an attempt to substantiate the diagnosis and show upon what findings we feel justified in making the diagnosis.

ILLUSTRATIVE CASES

(1) Guy S.—age 7 years—father and mother tuberculous. History on admission: emaciation, cough, slight chills, weakness, indigestion, weight 8 per cent below normal, slight elevation of temperature (99.2) rapid pulse (108), Hemoglobin 10 per cent below normal. On physical examination the following findings were noted: D'Espine's sign positive, bronchial breathing over both apices posteriorly, attacks of dyspnoea and cyanosis, pleurisy at the left base. Roentgenological examination showed a dense pleural shadow over the left base, hilum much enlarged and outline of shadow very irregular, becoming almost fleecy at the edge. Tuberculin positive.

(2) Elinor S.—age 2 years, sister of the above. No other history of exposure except as given above. The child was brought into the sanatorium because the mother was admitted as a patient. Temperature 99.8; hemoglobin 20 per cent below normal, weight below normal.

D'Espine's sign positive, a few rales were heard over the left base, slight impairment of resonance over the right apex posteriorly. X-ray plates showed an increase in the hilar shadow. Tuberculin markedly positive.

(3) George M.—age 10—Father died of tuberculosis shortly before the child was admitted to the sanatorium. The child had slept with his father. Two sisters have been patients in the children's division of this sanatorium. Complained of some pain in the chest, cough, sweats, fever. Temperature on admission 98. Pulse 106, 25 per cent below normal weight, hemoglobin 10 per cent below normal. D'Espine's sign positive, rales have been heard over both bases, posteriorly on several occasions, but are not always present. Pleurisy at the left base in 1925. X-ray plate shows an enlarged hilar shadow, also a pleural line at the left base. Tuberculin positive.

(4) Lorne S.—age 7 years—Grandmother and one sister diagnosed as tuberculous. He has a history of weakness, fatigue, loss of weight, sweating, poor appetite, fever. Temperature on admission 98.6, pulse 74, 11 per cent below normal in weight. Hemoglobin 20 per cent below normal. On physical examination the following was found: chronic discharging right ear, enlarged cervical glands on both sides, D'Espine's sign not definitely positive, breath sounds increased over the left apex. Hilar shadow slightly enlarged. Tuberculin positive.

(5) Charles B.—age 2 years—Mother was a patient in this sanatorium, and died of tuberculosis shortly after admission. There is no other history of exposure and symptoms, because of the age of the child, are lacking. Temperature 99 degrees, weight 27 per cent below normal, Hemoglobin 5 per cent above normal. D'Espine's positive, and a few indefinite scattered rales were heard over the left base. Roentgenological examination showed an enlarged hilar shadow, and some fibrosis in the second interspace on the left. Tuberculin markedly positive.

(6) Adelle B.—age 4 years—A sister of the above. Father said the child had had a cough and sweated excessively. Temperature on admission 99 degrees, weight 28 per cent below normal, hemoglobin 16 per cent below normal. D'Espine's sign positive, no other physical signs. The X-ray plate showed an enlarged right hilum, and some fibrosis at the root of the right lung and extending out into the parenchyma in the fourth space.

These cases are representative of tuberculous tracheo-bronchial adenitis. A brief summary of the history and physical findings in the 20 cases in the sanatorium at the present time shows the following:

(1) History: A positive history of close exposure to a known open case of tuberculosis was obtained in 18 out of the 20 cases (95 per cent).

(2) Malnutrition, or underweight in 9, or 45 per cent, (10 per cent or more under normal weight on admission).

(3) Loss of weight or a failure to gain in weight in 7, or 35 per cent.

(4) Fever; 17, or 85 per cent either gave a history of having had some elevation of temperature previous to admission or did have an elevation in temperature on admission.

(5) Sixteen, or 80 per cent had a rapid pulse rate.

(6) Anaemia; seventeen, or 85 per cent showed a hemoglobin percentage, 8 per cent or

more below normal for the age of the child. We have based our estimations on the tables prepared by Williamson.

(7) X-ray; sixteen, or 80 per cent, showed some abnormality of the hilar shadow which was interpreted to mean enlargement of the tracheo-bronchial glands. In addition, seven of the twenty showed evidence of a past or present tuberculous infection in the parenchyma of the lungs.

(8) D'Espine's sign; thirteen, or 65 per cent showed a change in voice conduction below the level at which such change would normally be heard for the respective age. Since there is much dispute concerning the proper normal level for this change in voice, the levels in use at this sanatorium will be given:

First year: First thoracic vertebral spine.

Second to fourth year: Second thoracic spine.

Fifth year: Third thoracic spine.

Sixth and seventh year: Fourth thoracic spine.

Eighth to twelfth year: Fifth thoracic spine.

(9) Tuberculin; seventeen, or 85 per cent reacted to 0.01 mgm. human old tuberculin intradermally. Children who do not react to 0.0001 mgm. old tuberculin are retested with increasing doses of tuberculin up to 0.01 mgm. If the result with this dosage is still negative, the diagnosis of tuberculous tracheo-bronchial adenitis is qualified by the addition of "quiescent" or "healed" depending upon the physical findings, leaving these findings as evidence of a former activity.

EVALUATION OF SYMPTOMS

A resume of the 20 cases referred to above demonstrates the importance of symptoms as follows: Cough 55 per cent, weakness and fatigue each 30 per cent, excessive sweating and shortness of breath, each 25 per cent, pain located somewhere in the thoracic cavity, 15 per cent, expectoration also 15 per cent, chills, poor appetite, restlessness or nervousness, each 10 per cent, indigestion was complained of only once in the 20 cases.

In 60 per cent of these cases, physical examination produced abnormal chest findings exclusive of D'Espine's or Eustace Smith's sign, 20 per cent had enlarged cervical glands and 25 per cent showed other indications. From the above, there is little room to doubt the probable accuracy of the diagnosis in these 20 children. History, fever, anaemia, X-ray, tuberculin—five out of the eight essential points were present in the greater percentage of the cases. D'Espine's sign, taken with whatever value it deserves, was also present in the majority. On this basis, lacking any more absolute proof, the diagnosis is justified.

I would like to add a word concerning the relative importance of the signs and symptoms as we rate them.

1. History: Much has been said of the relative value of a positive as against a

negative history of exposure. We have been accustomed to lay great stress upon the history, and if we can establish a definite history of direct contact, feel that tuberculosis must be ruled out rather than a diagnosis of tuberculosis established by ruling out the other causes of the symptoms. Asserson's⁸¹ work has shown the mortality of infants with a positive tuberculin test who were in direct contact with an open case to be almost 50 per cent before their fifth year. On the other hand she finds that only 12 per cent of tuberculin positive children of the same age, who were not exposed, died by the fifth year. In other words, the presence of a definite exposure increases the mortality over 3 times. In this sanatorium we have only 12 beds for the care of babies, that is, children under four years of age. Every child in this section at the present time has a definite history of direct exposure. Five of them are under two years of age. The ultimate prognosis is, of course, very poor, though the immediate results of treatment seem good.

2. The general physical condition has not been stressed by any of the authors referred to. In examining the children on admission to the sanatorium, we make a routine, thorough examination without special reference to any one part of the body. It is well recognized that good general physical condition is seldom found in the tuberculous child, even in the early stage of the disease. If the general appearance of the child is poor, we place as much value upon that finding as we do upon the summation of the other physical findings. If the general physical condition appears good, yet there are present some suggestive findings, as well as suggestive symptoms, we feel, as in the case of the negative history, that the presence of a tuberculous infection must be proven, rather than established by elimination.

3. If roentgenologists are not agreed upon what constitutes the picture of tracheo-bronchial adenitis, the same can be said for the clinicians. No hard and fast rule can be laid down in the X-ray diagnosis of the condition. De la Camp expresses the matter well when he says that this is the most difficult part of X-ray work. Experience alone will teach the roentgenologist what must be considered as a pathological shadow, and this experience must be obtained in conjunction with the clinician. As has been said earlier in the paper, the density of the shadow may vary from a faint shadow, with fleecy out-

line, simulating a parenchymal infiltration to a prominent, well outlined, opaque mass, admitting no doubt of the enlargement. If enlargement were the only thing to be looked for, the matter would be much simpler. But, in addition, the roentgenologist is expected to offer some estimation of the probable activity of the disease from the plate, and to say whether there is shown any involvement of the parenchyma. The shadow of the enlarged glands may cover up the picture of parenchymal infiltration, and even though serial plates are taken, the parenchymal involvement may be missed. There is no doubt but that, if plates are taken frequently enough, traces of the route of infection from the parenchyma to the glands in the vast majority of tracheo-bronchial adenitis patients will be seen. The X-ray films of the children in this sanatorium are read by a consultant roentgenologist, with the clinician present. The result is a correlation of X-ray and clinical data, which leads to a standardized interpretation of the shadows.

4. The cutaneous tuberculin tests are not sufficiently accurate either in dosage or interpretation, and we have replaced them with the intracutaneous test. All children, on admission, receive one-tenth of one c.c. of a one in one-thousand dilution of O. T. If this is negative, the dosage is increased and the test is termed negative only when a dosage 0.01 mgm. of O. T. has been reached without the occurrence of any local, general or focal reaction. In the presence of a consistently negative reaction, the child is observed for a period of thirty days, then brought before a clinical staff meeting, and failing, then, to show any evidence of activity is discharged with a diagnosis of "no active tuberculosis present." The intensity of the reaction, as has been said, varies considerably, not only for different children, at different ages, but also in the same child. If there is present a markedly positive reaction to 1/10th c.c. of 1 in 1000 O. T., we feel there is little doubt of the presence of tuberculosis in the child, and if in addition the physical findings and the X-ray point to tracheo-bronchial gland enlargement, we feel that sufficient to diagnose the child. The younger the child in whom the intense reaction occurs, the poorer the prognosis, the more certain the diagnosis, and the more likelihood of the presence of other tuberculous lesions. If the reaction to 0.01 mgm. of O. T. is slight, we accept the finding as evidence of an infection, but require definite clinical findings before a diagnosis of

activity is made. 0.01 mgm. will be considered by many to be too small a dose at which to stop in the testing of these children. We prefer to accept a negative reading of the test rather than to push the dosage to the limit. We feel certain that 0.01 mgm. of O. T. is a perfectly safe dose to use where the smaller dosage has resulted in a negative reading, and furthermore, have failed to see any harmful results from its use. Almost every child will react to a large enough dose of O. T., but there is danger from too large dosage and we prefer to be on the conservative side. The dosage in common use here increases the following dose ten times that of the previous dose, and even where the former dosage may not have produced a reaction, ten times that dosage often gives a reaction that is almost alarming in its intensity. Therefore the smaller the dose that will suffice to establish the diagnosis, the better.

Considerable space has been given to these four points, History, General Physical Condition, Roentgenologic Findings, Intradermal tuberculin, in the diagnosis. It is upon these that we place the most value and while we do seek for and note any of the other signs which may be present, we make use of them only as confirmatory evidence, not as diagnostic points. All of them are worth seeking, and their presence will increase the certainty of the correctness of the diagnosis, the seeking for them make for a more careful examination.

SUMMARY

An early diagnosis of tuberculous tracheo-bronchial adenitis is of the utmost importance, but there is no method at our disposal at present by which the adenitis or its tuberculous character can be established with certainty. None of the authors quoted agree upon the value of the various signs and symptoms.

D'Espine's sign and Eustace Smith's sign have both been shown to be without diagnostic significance. Intradermal Old Tuberculin tests and the shifting of the nuclei show the presence of a tuberculous infection, but do not prove whether the infection is active or quiescent. The sedimentation and complement fixation tests, even when positive, are inconclusive.

The change in resonance in the paravertebral and interscapular area is most difficult to demonstrate. This change is very slight and requires the touch of a past

master of percussion. The vast majority of us will fail to find it.

Even when all of the physical signs and the roentgen film are characteristic of enlargement of the tracheo-bronchial glands, the specific nature of the enlargement remains to be proven.

A sufficiently large dose of Old Tuberculin will produce a focal reaction in the diseased area and thus prove its tuberculous nature, but doses large enough to produce a focal reaction frequently reactivate a previously quiescent lesion.

A history of exposure to an open case of tuberculosis, a positive tuberculin test, suggestive roentgenologic findings, coupled with physical signs suggesting the presence of infection in the child, are sufficient to warrant further observation of the child either in a preventorium or sanatorium.

CONCLUSION

A review of the literature and consideration of our own cases demonstrates the inadequacy of our present methods of diagnosis of tuberculous tracheo-bronchial gland enlargement.

The presence of any five of the eight symptoms and signs (history of exposure, loss of weight or a failure to gain in weight, malnutrition, elevation of temperature, anaemia, physical signs, X-ray, positive intradermal Old Tuberculin test) in a child, warrant its observation either in a preventorium or a children's sanatorium, where a more detailed study of the case may produce evidence which will warrant a positive diagnosis of tuberculous tracheo-bronchial adenitis, or rule out the presence of tuberculosis as the cause of the symptoms and signs. We attach the greatest diagnostic value to the history of exposure, general physical condition, tuberculin and X-ray findings.

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LOCAL ANAESTHESIA AND ITS FATALITIES

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The subject of local anaesthesia and its fatalities is a very difficult one to discuss because of the unreliable statistics available. The medical profession is very prolific in reporting its successes, but decidedly averse to publishing the fatal results of its procedures. This is especially true of operations in which local anaesthesia has been used as they are frequently operations of choice advised and urged by the surgeon.

However, several investigators, most prominent of whom is E. L. Mayer of New York city, have with great patience collected information regarding many of these fatalities. It is from these reports that much of my material has been taken.

Before we can consider the fatalities, however, a short history of local anaesthesia and its progress is essential to an unbiased conclusion.

HISTORY

Tradition cites many attempts on the part of Egyptian, Chinese, Greek, and Roman physicians to remove certain diseased parts of the human body without pain. Stupifying drinks of alcohol and juices of narcotic plants were used for centuries in the search for painless surgery. During the Middle Ages these drinks were abandoned and using narcotic inhalations, the skill and speed of the surgeons were relied upon to successfully complete their operations. Compression of nerve trunks was tried and discarded as it so frequently resulted in gangrene from blocking of neighboring circulation. Chilling the tissues was popular toward the latter part of the fifteenth century, forgotten and then tried again three hundred years later with some success. Many used local applications of chloroform or ether, or cataplasms of poppy, henbane, and mandrake root, but with very discouraging results. A combination of chloroform and the cataphoric action of the electric current was advocated by Adamkiewitz until it was proved by Wagner and others that cataphoresis did not occur with a non-conductor such as chloroform.

Brown-Sequard claimed that they were able to anaesthetize the larynx by passing a stream of carbonic gas over the back part

of the throat, but Lewin in 1862 made the statement that a drug for producing local anaesthesia of the larynx did not exist.

For some time after Alexander Woods invention of the hypodermic needle, morphine was injected around nerves for local anaesthesia, but the procedure did not prove valuable.

In 1884 cocain was first used as a local anaesthetic and the new era began. Prior to this date local anaesthesia had been a failure, but its use now became widespread, although only for minor surgery. It was many years before it was tried to any great extent in major operations.

Cocain derived from the coca plant indigenous in Peru and Bolivia, but later introduced into India, Ceylon and Java, has been cultivated since prehistoric time. It played an important part in the religious and political life of these countries and is still used by natives to increase their wakefulness and physical powers of endurance.

Due to the wholesale and indiscriminate use of cocain, many accidents resulted and the first objection to the general use of local anaesthesia was expressed by Hoffman and Frankel. Accordingly extensive research was started on derivatives of cocain. Giesel introduced the first, tropacocain, a new alkaloid derived from Java coca leaves. This was followed in rapid succession by bucain, holocain, eucain, nirvanin, ansemin, akoin, stovain, alypin, anesthin and novocain. Later substitutes which have been developed are butyn, propasin, subcutin, orthofrom, nirvain, chlor-etone, apothesine, quinine urea, hydrochloride and preparations such as Harris solution and Schleich's solution.

PHYSIOLOGY OF LOCAL ANAESTHETIC

Cocain, the first and typical local anaesthetic, acts physiologically as a protoplasmic poison. The symptoms manifest themselves at the point of application or injection, and after absorption at distant parts of the body. Locally cocain paralyzes the function of the peripheral nerves and the stripped and smooth muscle fibers without permanent damage to the tissues. If it is in sufficient strength, heart muscle is also paralyzed. The local application of cocain causes a contraction of small capillaries and arteries, especially in mucous membranes, so that locally the blood supply is temporarily diminished. This effect causes the absorption to take place more slowly, thereby producing a more intense local paralysis. Cocain introduced into the body and absorbed by

the circulation may act upon the protoplasm of organs in places remote from the point of introduction. These organs will respond to the toxic agent with irritation or paralysis if the blood passing into them contains sufficient quantities of the drug. The heart is much accelerated in mammals due either to direct action on the muscle or by stimulation of the accelerator mechanism. The combination of constricted blood vessels and accelerated rate of the heart leads to a very considerable rise in blood pressure. Small amounts tend to cause marked pallor of the intestine and powerful peristalsis while large doses cause dilatation of the mesenteric vessels and lessen movements of the bowel, probably through paralysis of the local nervous mechanism. It forms a chemical combination with protoplasm and when broken is not liberated as cocain, but as ecgonin which has slight toxic action. When toxic action results it is because an excess has been used over what was necessary to saturate the tissues and paralyze the nerves. Applied to the eye, it produces local anaesthesia, contraction of the conjunctival vessels, dilatation of the pupils and often partial loss of accommodation.

COCAIN AND CENTRAL NERVOUS SYSTEM

The physiological action of cocain on the central nervous system is extremely important in the consideration of this subject. Early signs of poisoning are those of cerebral stimulation, the stimulation rapidly spreading downward through the medulla and cord. This is followed in the severe cases of poisoning by a descending depression beginning with the cerebrum, extending downward to the lower divisions, and finally paralyzing the respiratory center in the medulla. Cushney states that "the two stages are not definitely divided, however, one part of the cerebrum often showing distinct depression while another is still in the condition of excessive activity. In some cases, especially in man, the stage of excitement may be very short or apparently absent and the whole course of the symptoms then points to medullary depression."

DISCUSSION OF TOXICITY

This brings us to the discussion of the toxic symptoms and fatalities of local anaesthesia. Again cocain is taken as the typical local anaesthetic, its substitutes giving similar general signs and symptoms of poisoning. Quoting Cushney, "The symptoms of cocain poisoning in man vary

a good deal in different individuals. In most cases small quantities produce some excitement, pleasurable or disagreeable. The patient is generally restless and more garrulous than in ordinary life, often somewhat anxious and confused. But very often a small dose is followed by a calm, languorous state, somewhat resembling that induced by small quantities of morphine, but differing from it in there being less tendency to sleep. The pulse is accelerated, the respiration is quick and deep and the pupils generally dilated. Headache and dryness of the throat are often complained of. The reflexes may be found somewhat more easily excited than usual and tremors or slight convulsive movements often occur. Later, powerful tonic or clonic convulsions supervene, the heart becomes extremely accelerated, the breathing becomes rapid and dyspnoeic and may be finally arrested during a convulsion. In other cases the convulsive seizures are almost entirely absent, fainting and collapse being prominent. The skin is usually cyanotic and cold in these instances, the heart slow and weak, the respiration is very much depressed and death follows from its gradual cessation. Vomiting is occasionally seen at an early stage, but is by no means common."

An unprejudiced analysis of the fatalities of local anaesthesia requires us to recognize the following facts: First, that all surgical procedures, no matter how trivial, are dangerous and should not be entered into without careful deliberation of the patient's fitness to stand the psychical and physical shock. Second, that there are individuals who die suddenly from shock or fright, some of whom have no gross or demonstrable pathological changes. And lastly, that local anaesthesia has been greatly abused and very carelessly administered in many instances of death. Of course, a few cases of sudden death have been reported following the injection or application of a few drops of known strength anaesthesia. Cause of death in these apparently normal individuals is problematical, although numerous theories have been offered to explain it. Advocates of these theories suggest that the solution has been injected too rapidly, that the drug has been spilled into the throat and swallowed, that the needle has been pushed into a vein or in throat work into one of the large branches of the carotid. None of these explanations have been proven and the exact cause remains as much of a mystery as ever. Many feel that certain

people have an idiosyncrasy to the particular drug that is being used. Yet several of the cases reported in literature are patients in whom much larger quantities of the same drug had been used with impunity on previous occasions. There is on record a case where the patient suddenly died following a sterile saline hypodermic injection subcutaneously.

CAUSE OF DEATH SOUGHT

An extensive review of the literature reveals the enormous amount of experimental work that has been done in an attempt to find the cause of death in local anaesthesia. Extensive laboratory experiments have been carried on with animals in order to determine the fixed maximum dose of cocain and its substitutes. The results have been rather discouraging, however, as man often reacts to these drugs quite differently from animals. The fixed maximum dose of cocain is without practical value, for by the observance of certain precautionary measures, much larger doses of cocain can be introduced into the body without apparent effect. These precautionary measures consist primarily in preventing too rapid absorption of the drug so that the smallest maximum doses enter the blood stream at one time. Yet Eggleston and Hatcher, reporting experiments on cats in 1919, stated that although alypin, beta-eucain, apothetin, nirvanin, procain, and stovain are destroyed at the rate of at least one fatal dose every twenty minutes; holocain is apparently destroyed a little less rapidly, one fatal dose requiring about a half hour. Cocain was shown to be destroyed at the rate of one fatal dose every hour, if as rapidly as that, and the rate of its destruction apparently decreased progressively. They also brought out the difference between "essential" elimination and immediate elimination of a drug. "Essential" elimination, they said, means elimination of a poison from those organs upon which its essential or toxic actions are exerted; to distinguish it from that elimination which takes place immediately after the drug enters the blood stream. In most of cocain's substitutes, with the exception of holocain, the "essential elimination is virtually the same as the immediate elimination and is practically identical with total elimination. With cocain repeated doses leads to an increasing amount of the drug present acting upon essential organs and a cumulative effect results. This explains why, in animals at least, the recovery from a sublethal dose

is more rapid with some of cocain's substitutes than with cocain itself. If an idiosyncrasy does not exist and the irregular action of cocain can be ascribed to the peculiarities of the drug itself, it cannot be denied that the nervous system reacts differently to nerve poisons in different individuals, and likewise in its reactions to cocain. With the presence of such an indefinite susceptibility it is impossible to establish any definite dose for cocain as an anaesthetic.

Cushney gives the dose of cocain hydrochloride, injected, as $1/6$ to $1/2$ grain. Eggleston and Hatcher, in their 1919 article, demonstrated that in cats five times the fatal intravenous injection of the substitutes was survived when injected subcutaneously. About three and one-half times the fatal intravenous dose of cocain could be tolerated in this manner.

As explained by Dr. Patrick Watson Williams of England, however, in animals cocain has a relatively low danger ratio and they are more likely to afford warning by manifestation of syncope or dyspnoea while one is still far from a fatal dose. With butyn and several of the other substitutes they tend to give less timely warning because it is only when the dose more closely approaches the lethal dose that toxic symptoms appear.

COCAIN MINIMUM LETHAL DOSE

The minimum lethal dose of cocain has been estimated to be 1.2 grains, but because of difficulty in comparing animals to man and the varying sensitivity of individuals, this is necessarily inaccurate.

As stated before, the most reliable records of fatalities are those discussed by E. L. Mayer, chairman of the committee for the study of toxic effects of local anaesthetics of the American Medical Association. Writing in 1920, he concluded that local anaesthesia was the choice over general for nose and throat work and that the greatest danger lay in too rapid injection or entering a vein. He stated that synthetic products might be injected slowly in unlimited quantities, for the drugs, as a rule, are rapidly eliminated by the liver. He urged a careful investigation of the patient's general condition with especial reference to cardiac disease, exophthalmic goitre, nephritis or disturbance of glands of internal secretion. The recumbent position during operation, to relieve the strain on the heart, was very strongly urged by him at the time and reiterated in his later

reports. During the discussion of this subject Professor Rudolph Matas of New Orleans, an authority on local anaesthesia, suggested that procain was the ideal anaesthetic for many cases, using epinephrin to reduce the toxicity of the anaesthetic. He stated that since the use of epinephrin he had not observed toxic effects from cocain and had used it freely in solutions of 0.5 per cent to 1 per cent. And added that the thirty deaths reported in Paris in 1883 from cocain poisoning had in all but seven instances been due to excessive amounts of the drug. Dr. Allen, also of New Orleans, mentioned that he had not seen a case of idiosyncrasy to cocain in his private practice and had used it for twenty years.

Mayer in this report listed twenty fatalities, details of which he had collected. Two of these were in nose operations, while eighteen occurred in surgical procedures in the throat. Fourteen were cocain deaths, five of them due to mistakes in solutions, and six were procain deaths.

In 1921 Mayer again reported a group of cases in which local anaesthesia had been fatal. This group consisted of thirty-two previously unreported cases. Five of the deaths on investigation proved to be due to other factors, and in five instances the physicians who operated the patients refused to give details regarding them. Eleven were due to cocain, of which three were mistakes on the part of nurses, five cocain and procain, three procain, one apothecin and cocain, one apothecin, and one cocain and alypin. In the cocain deaths, seven were following the injections of a solution varying in strength from 0.2 per cent to 20 per cent. One nose operation was listed in which the nose was packed with 10 per cent cocain for thirty minutes with sudden death four minutes after reaching the operating room. A larynx operation for removal of a papilloma resulted in death one hour after spraying the throat with 10 per cent cocain. One cystoscopy where 8 c.c. of 4 per cent cocain solution had been used in the bladder, was followed by sudden death.

In the cocain-procain deaths: cocain mud, 10 per cent cocain solution or 20 per cent solution were painted on the mucosa of the throat preceding an injection of 10 c.c. of 0.5 per cent procain in one case, 12 c.c. of 1 per cent procain on each side in another, 1 per cent procain amount unknown in a third, 10 c.c. of .5 per cent procain in the fourth, and 10 c.c. of 0.5 per cent procain on each side in the fifth.

QUANTITATIVELY SYNERGISTIC

Hatcher and Eggleston's conclusion that local anaesthetics are quantitatively synergistic should be emphasized at this point. For example, they proved that in animals, at least, if 50 per cent of the fatal dose of two drugs be injected at once the 100 per cent fatal dose of one of them is the result. As far as I could determine the exact percentage of a drug that is absorbed by mucous membrane application, has not been proven, and because of this, application of a strong local anaesthetic to mucous membrane followed by injection must be considered dangerous. A 70 per cent fatal dose of cocain, for example, may be absorbed from mucous membrane application and the subsequent injection of a 50 per cent fatal dose of cocain or its substitutes would be very apt to produce sudden death.

Mayer's report in 1923 included 42 deaths from the use of local anaesthesia.

Cocain, 18; Stovocain, 1; Alypin, 1; Procain Novocain, 3; Novocain cocain, 10; Apophesin, 4; Butyn, 4; Butyn cocain, 1.

His conclusions explain that the large number of deaths reported from cocain in this series is relatively small owing to the frequency of cocain anaesthesia and the indiscriminate use of highly concentrated solutions.

Forty-three deaths were listed in his 1924 report, 26 from cocain alone, or from cocain and procain, 4 from apophesin, 1 alypin, 4 butyn, 2 procain, 1 stovain, and 1 butyn and cocain. Fifteen deaths were during operations in which the patient was lying down, 21 while the patient was in the sitting position, and details regarding the others were not available. Among his recommendations he stated that cocain should not be injected into the submucous tissue or subcutaneously, and that cocain paste ("mud") should not be used as a preoperative measure. Its use in that way was unreservedly condemned. Yet Oberst (Pernice) since 1889 has used .5 to 1 per cent cocain without incident. Reclus (Auber, Tillon, Delbose, Legrad) reports 7,000 cases in which .5 to 1 per cent solutions of cocain were used without a fatality. Dr. Watson Williams reports the use of cocain since 1886 with only three cases of alarming faintness, no casualties. Dr. Canfield has used cocain .5 per cent for injection purposes, during 25 years of the practice of otolaryngology without a death. Dr. Lillie of Mayo Clinic, in a letter dated January 28, 1928, writes: "We have used 1/5 of 1 per cent cocain hydrochloride solution in 35,000 patients with one fatality."

This patient had C.N.S. lues. At the University of Michigan hospital, where most of the work is done by young men being trained to otolaryngology, a .5 per cent solution of cocain hydrochloride plus adrenalin has been used in approximately 14,000 local tonsillectomies with two casualties. The first of these was a woman, 20 years old, who was referred to the clinic from medicine where a diagnosis of double mitral disease had been made. She stated she had suffered an attack of inflammatory rheumatism seven years before and several mild attacks since. Examination showed small septic tonsils, deeply buried, the crypts filled with pus. The patient was brought to the operating room complaining of no symptoms whatever. Her color was good, and she talked freely about the operation and did not seem to show any signs of fright or apprehension. The right tonsil was injected with about a dram of 1/2 per cent cocain hydrochloride solution in one to ten thousand adrenalin chloride. The right tonsil was then slowly and carefully enucleated and all hemorrhage checked. The patient stated she felt fine at this time. The left tonsil was then injected, using a dram and a half of the same solution. The tonsil was nearly enucleated when the patient turned deathly pale and fell forward as if in a faint. The skin was covered with a cold, clammy perspiration. She suddenly became cyanotic and stiffened up against the back of the chair; straightened out her legs and back; took a few short gasps and fell forward, eyes wide open and pupils widely dilated. In spite of two hours of emergency treatment she did not breathe again. In an attempt to revive her the tongue was drawn forward, artificial respiration performed, the patient given strychnine 1/30 grain and ether subcutaneously, lung motor applied, 1/150 atropine administered directly into the heart; intravenous strophanthin, saline infusion under both breasts and stimulating enemata, but to no avail. Autopsy revealed congenital syphilis, diffuse interstitial myocarditis, aortitis, pancreatitis and hepatitis, aortic insufficiency, relative insufficiency of the mitral valve, cardiac dilatation, active miliary tuberculosis in the bronchial nodes and degeneration of the liver.

The second case, a medical student 25 years old, also died several minutes after injection of the left tonsil. His respirations ceased little more than a minute after convulsions started. Autopsy reported,

acute myocardial failure with terminal right sided cardiac dilatation, thymico-lymphatic constitution with hyperplastic thymus and generalized lymphoid hyperplasia.

Both of these deaths occurred some minutes after the second tonsil was injected, the first having been injected and immediately enucleated. Obviously death in these cases was not due to intravenous injection as the symptoms were delayed and intravenous injection of a fatal dose of local anaesthesia produces immediate toxic effects.

Cocain paste (mud) has been used as a block anaesthesia in over 6,000 nasal operations in this clinic without a fatality. It is not painted over the mucous membrane of the nose, however, but only applied at two points on each side, which may have considerable bearing on its safety.

SUBSTITUTES FOR COCAIN

Consideration of the substitutes for cocain is an unsatisfactory task because of their large number and because of the biased opinion of most of the literature concerning them. So much has been written by men who have chosen one of them as their ideal local anaesthetic and praised it unstintingly, then had a few fatalities and changed to some other solution without airing their disillusionment. For, as Mayer concludes in his 1924 report, "accidents occur with more recent synergistic anaesthetics as well as with older agents—symptomatology similar in all." Indeed, I feel that we can concur with Dr. Canfield in the statement that, "The anaesthesia produced is directly proportional to the toxicity." In other words, if we use an anaesthetic of low toxicity, a relatively larger amount of the drug is necessary to produce satisfactory paralysis of the sensory fibers, raising the toxicity to that of a stronger solution used in the proper amounts.

The ideal local anaesthetic as described by Braun should have the following attributes:

1. A drug which must produce a diffusible, complete and lasting anaesthesia.
2. One in which the following systemic absorption should be less toxic than cocain in proportion to its anaesthetic power.
3. One that will not produce irritation and painful infiltration or cause local tissue damage, but should be absorbed without secondary effects such as hyperemia, inflammation, exudation, or necrosis.

4. A drug soluble in water and whose solutions are stable.

5. A preparation which must be readily sterilizable by heat, preferably boiling in solution.

6. Unless more powerfully anaesthetic and at the same time less toxic than any known substances, the drug should be compatible in solution with adrenalin.

Meeker, writing in the *Journal of Laboratory and Clinical Medicine*, feels that novocain, the common trade name for procain, fits all of these requirements. It is said to be the least irritant of all the local anaesthetics in use. Large amounts of it are being used daily, in general surgery with few fatalities. Various observers give its toxicity as $1/3$ to $1/5$ that of cocain. Meeker states that sodium or potassium bicarbonate added to novocain makes it almost equal to cocain in mucous membrane anaesthesia, but to my knowledge, this solution has not been used clinically.

Butyn in a 1 per cent solution is as powerful as 2 per cent cocain. It is more efficient for surface anaesthesia than any of cocain's substitutes, but not as efficient as cocain itself. Injected, it is said to produce occasional severe local tissue changes. It is more toxic than cocain and has the added disadvantage of not possessing ischaemic properties and of being irritant to mucous membranes. Large quantities of adrenalin are necessary to overcome these shortcomings and this in itself is dangerous. Eight deaths from its use are listed in Mayer's reports, two after application of 5 per cent solution to the nose.

Apothesin, using $1/2$ to 2 per cent solution, is a popular anaesthetic, since chlore-tone has been omitted, and is widely used in surgery with excellent results, according to many. It has largely replaced stovain and procain for spinal anaesthesia, operating with the head and shoulders elevated. Hamilton states that it is $1/5$ as toxic as cocain hydrochloride and is equal to it for nerve blocking and terminal anaesthesia. Numerous cases of sloughing and gangrene and several fatalities have been reported from its use.

Quinine Urea Hydrochloride has been extensively used, but has produced considerable local tissue disturbance and pain during injection. The anaesthesia produced is a prolonged one, however, and is used in rectal work with a preliminary injection of some other local anaesthetic. Cases of sudden, total and complete deafness, following its administration in nose and

throat work, have kept many operators from utilizing it.

Space will not permit even a short discussion of the other solutions, but most of them have been abandoned due to toxicity, irritation or poor anaesthesia.

TREATMENT OF POISON

A great deal has been written regarding the treatment of poisoning due to cocain and its substitutes, yet recovery after a convulsive dose of a local anaesthetic is rare. Weiss in 1923 concluded that the formerly advocated calcium salts did not act as antidotes for the toxic effects of cocain, and their use as a therapeutic measure was not warranted, although Ca Cl does have a stimulating effect on the respiratory center. Alpha lobelin is used in some clinics as a respiratory stimulant, but its action is not dependable or uniform. Strychnine is contraindicated as it increases the convulsions, and morphine, as it further depresses the respiratory center.

Mayer feels that morphine, scopolamine and atropine, except in very small doses, tend to depress the respiratory center and produce inhibition of the heart due to direct stimulation of the cardio-inhibitory mechanism. Atropine is known to do this in animals. Atropine does not reduce the toxicity of cocain with epinephrin, as claimed by some. Nitroglycerine administered to cats permits the injection of a lethal dose of cocain without fatal results, but its action in man under these conditions is questionable.

Mayer emphasized the synergistic action of general anaesthesia and local anaesthesia and quotes Eggleston and Hatcher, who found that cats anaesthetized with hydrated chloral succumb to doses of procain that are harmless to normal animals. He advises ether or chloroform only for the convulsive stage and then sparingly.

DANGER OF TOO MUCH ADRENALIN

Meeker emphasizes the danger of using too much adrenalin in local anaesthesia, stating that cocain and adrenalin injected into the submucosa act strongly synergistically and that adrenalin in large amounts markedly increases the toxicity of cocain. Submucous injections of cocain and adrenalin are capable of causing enormous increases in arterial and venous pressure. He also states that sufficient cocain is absorbed from sponging the pharynx with a 20 per cent solution to increase the sensitiveness of the system to the action

of adrenalin. One of Mayer's reports contains the statement that "epinephrin in very small amounts does not increase the toxicity of procain injected subcutaneously or around a nerve, but epinephrin is probably a contributing factor in many cases of death." This action is independent of thyroid dyscrasia as shown by Kessel, Lieb and Hyman, who state that "sensitiveness to epinephrin has nothing to do with thyroid function and may occur in complete absence of the thyroid gland."

Previous to 1925 the only satisfactory procedures in cocain poisoning, according to Mayer, was to place the patient in a recumbent position, use artificial respiration and cardiac massage with possibly an intracardiac injection of not more than 2 c.c of 1-10,000 epinephrin. He also said that possibly intracardiac digitalis would be beneficial, but stated that the dosage of the drug used in this manner was problematical. The artificial respiration and cardiac massage are to keep the patient alive until the liver has eliminated the drug, but the procedure has rarely been successful with humans.

In April, 1925, Tatum, Atkinson and Collins published the results of using sodium barbital and paraldehyde in cocain poisoning of dogs. They found that the intravenous injection of 100 mg. of barbital sodium, per K gm. of body weight, with 5 c.c. of saturated solution of paraldehyde in saline, per Kgm. body weight, would raise the lethal subcutaneous dosage of cocain in dogs 400 per cent. However, if convulsions were allowed to occur, the dosage from which they recovered was considerably lower. This preparation was suggested by them for clinical use. They concluded that atropine, chloral hydrate, ether and morphine, separately or variously combined, were not satisfactory antidotes, even actually increasing the danger.

Since this discovery, several operators have published reports of the use of these drugs. Gultman advises using 1½ grains of phenobarbital one half hour before operation and mentions cases where mild symptoms of cocain poisoning were present and immediately relieved by administration of a 1½ gr. phenobarbital tablet. The same patients experienced none of these symptoms at later operations, when this drug was administered before the anaesthetic.

Leshure states that since using sodium barbital, 6-12 gr. by mouth, one-half hour before operation, he has noticed no symptoms of cocain poisoning.

At our own clinic we have observed that using sodium barbital the patients have less tendency towards the faintness that occasionally follows the administration of morphine preoperatively.

SUMMARY

In summarizing this discussion, we must consider the advice of a few who suggest discontinuing the use of local anaesthesia because of its tragic fatalities. We feel that the use of local anaesthesia is justifiable comparing its relative safeness to the frequent complications of nose and throat operations under general anaesthesia. It is our belief, backed by the statements of reliable observers, that cocain properly used is as satisfactory and safe a local anaesthetic for nose and throat operations as any of its substitutes in use at this time. For tonsillectomies we use 7 to 8 c.c. of a 0.5 per cent cocain hydrochloride solution with 5 minims of epinephrin hydrochloride to the ounce. This totals about .6 grains of cocain hydrochloride, although less than that amount is frequently sufficient. Using a short, large bore, bent needle, the solution is carefully injected submucously at three or four points around the capsule of the tonsil; watching carefully to see exactly where the solution is going. Great care is exercised to be sure that none of the solution is spilled into the throat and that the injection is only superficial and not out into the tissues of the neck. The tonsil is then immediately enucleated as the anaesthesia is instantaneous. In this way much of the solution escapes into the throat and is expectorated with the accompanying blood. Hemorrhage is carefully checked and the other tonsil injected and enucleated in a similar manner.

The solution is put up in hermetically sealed 10 c.c. glass ampules plainly labeled with the name and strength of the drug.

As stated before, cocain paste (mud), unreservedly condemned by E. L. Mayer and his committee in 1924, has been used in some 6,000 cases in our clinic without a fatality, but only about 10 gr. of cocain powder are used in each case.

CONCLUSIONS

1. Statistics regarding fatalities due to local anaesthesia are unreliable, with the exception of those by conscientious investigators such as E. L. Mayer.

2. Many fatalities are due to careless use of cocain and its substitutes.

3. There are individuals who suddenly die from shock or fright before an anaesthetic has been administered.

4. Man's reactions to drugs are frequently different from those of laboratory animals, some individuals seeming to have a susceptibility to certain of the local anaesthetics.

5. As Mayer has stated, "accidents occur with more recent synergistic anaesthetics as well as with older agents, symptomatology similar in all."

6. The exact cause of death in these cases is not known.

7. Administration of sodium or phenobarbital before operation seems to do away with many of the symptoms, such as faintness and nausea, that followed a preoperative injection of morphine. According to some observers it prevents signs and symptoms of cocain poisoning.

8. Choice between cocain and its chief prototype, novocain, or any of its substitutes, depends on an accurate knowledge of the toxic, destructive and anaesthetic properties of the drugs in question.

9. Cocain has been indiscriminately used and unjustly condemned in many instances. Applied or injected carefully and intelligently, it has been justified by the experience of an imposing list of authorities in local anaesthesia.

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"MEDICAL LEGISLATION IN NEW YORK"*

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It is a distinction for New York State to be asked by another state to talk of its Medical Practice Act and the results of it in operation. It is a pleasure to bring to you the greetings of the officers of our State Medical Society.

New York has a long background of medical legislative history; and it is of value to consider it. Medical legislation, like other things, has often advanced because of what has happened in the past. The records for the last one hundred and twenty-five years frequently show that this has been forgotten. The work of the New York State Society illustrates some historical forgetfulness, and some successes due to keeping in mind that which has gone before. Perhaps some of you recall that Dana recently said, "we get a further view ahead by standing on the shoulders of those who have already done pathway work."

Medical legislative history in New York commences in New Amsterdam on the Island of Manhattan in 1652—two hundred and seventy-six years ago—in an order to regulate the practice of medicine so that quacks and charlatans should not have too prominent a place in the community.

In 1665—two hundred and sixty-three years ago—a still more serious effort to regulate the practice of surgeons, midwives, and physicians was established and the law said—let me read the quotation: "no one employed about the bodies of men, women or children for the preservation of life or health should presume to put forth any act contrary to the approved rule of art; or exercise any force or violence toward the body without the advice and consent of such as are skillful in the same art—if such may be had—or at least the consent of the wisest and gravest who were present together with the consent of the patient;" and it was further stated that "the purpose of the law was to direct and encourage those having skill in the right use thereof and to restrain those having presumptuous arrogance." This and other laws on Manhattan Island overshadow the efforts of recent years and remind us that organized medicine has for long past tried to do something for the proper regulation

of the practice of medicine and for community protection.

Then there came a colonial law in 1760 by which the physicians of the province of New York endeavored to secure for its citizens through legislative measures, the results of advancement in medical knowledge and protection against quackery and malpractice. This act was the first one in this country that compelled everyone who wanted to practice medicine to be examined and admitted by law and there was a penalty for violation. The province of New York, though not at that time the most populous, had priority in establishing an efficient medical practice act, though Dr. Beck points out in his Presidential Address of 1842 that more than a century before this act (in fact in 1649) the Colony of Massachusetts "attempted the regulation of medicine and the correction of its medical abuses."

There were some other medical laws immediately before the Revolution and several immediately after the establishment of the state government but none of them had anything to do with regulating the practice of medicine until 1792 when a time of at least two years of study was required in New York City. Then there was another enactment covering the whole state of New York in 1797, that one must have practiced for two years or have studied for two years with a reputable physician before he could be licensed by the court; and the act of 1792 was repealed. All of these laws had to do with better educational requirements for physicians and community protection from disease, just as modern medical practice laws have been characterized by these things.

After several years of discussion and the overcoming of both lay and professional opposition, the physicians of New York State were successful in 1806 in having enacted a law creating county medical societies and empowering delegates from them to organize a State Medical Society. The county societies were given the power of granting or refusing license to practice medicine upon examination. Various amendments have been established since that time terminating in the great Medical Practice Act of 1926. The laws of 1806 were revised in 1813 and 1828. Often (and at times every year) efforts were made to lower the requirements for licensing physicians—relatively not unlike the efforts of medical legislative history in the first twenty years of the present century.

Since 1760 in New York Province and

* Talk at the Secretaries' Conference of the Medical County Society of the State of Michigan at Detroit, May 14, 1928.

then in the State, the ground upon which all medical legislation to regulate the practice of medicine was based, was the medical protection of the people, and yet the profession did not escape any more than they do today the charge of self-interest by many laymen, and those trying to be licensed as the result of limited study and knowledge of the human body. Nearly every year up to 1843 some remodeling of the law was attempted and a large number of people made urgent demands for alteration or repeal of the law exactly as they did in New York State for twenty-five years terminating in 1926.

In 1842 the Thompsonian physician without examination sought admission to practice medicine in the same legal way as those entering the profession by law. They were backed up by the public which perhaps was in revolt because of the heroic methods and dosage common at that time. Anyway the medical profession did not take the public into confidence, or try to gain support at that time as finally discovered that it had to do, and did do in New York in 1926.

It does not appear to have ever been the intention of the legislature to recognize any particular mode or system of medical practice; and the arguments by the medical profession in 1842 against the admission of the Thompsonian physicians, were used against the cults from 1916 to 1926, with the difference that in 1926 the lay support was generous. The mass of the people who had worked hard supporting the Thompsonian effort, succeeded in 1844 in enacting a law which allowed any inhabitant of the state to practice medicine without license from the Regents, or a County Medical Society, or a degree in medicine, but when he was permitted to practice without being licensed, he could not charge for his services nor collect by suits-in-law. (The Thompsonian physician, some of you may not know, was one who used only infusions or teas made from roots or bark of plants grown in the United States). Curiously the medical profession to quite an extent supported this legal effort. In 1840-1842 several county medical societies in New York concluded that all prohibitory enactments were inexpedient and that the medical society of the state and the medical profession in general were abundantly able to take care of themselves without legislative support; and that in asking for laws from time to time, it was to protect the public and not to gain any advancement in the way of self inter-

est. Many medical men thought that if all restrictions were taken off "so that not having the agitation and the sympathies of the public to feed it," this cult would go down.

This was a time of great excitement, agitation, and revolution in medical laws, which continued to about 1850; in some ways like the efforts of the chiropractors to be admitted from 1916 to 1926, though probably more intense. The laws of 1844 removed all restraints to practice, subjecting those practicing only to civil liabilities for malpractice, criminal prosecution for gross ignorance or immoral conduct; allowing them to collect by law for services; leaving all other statutory provisions untouched and rendering them, of course, ineffectual.

About this time there existed a very low standard of medical education throughout the country. Schools were founded where they were not needed. They were in a state of acute rivalry, competing for students by shortening the course of instruction and making graduation easier.

At the annual meeting of the New York State Society in 1844, Dr. N. S. Davis introduced the resolution which resulted in 1846 in the foundation of the American Medical Association; although the subject had been called up in 1839 by Dr. McCall of New York. The American Medical Association was founded for the primary purpose of raising the standard of medical education just as the organization of the New York State Society in 1806 was for the purpose of raising the professional standard among physicians. There was decided opposition to this proposal, and mostly from medical schools, with perhaps more bitterness and personalities than has ever happened over any other question within the profession.

The low standards maintained for the purpose of attracting students and the jealousies of teachers in medical schools show how low all sense of professional dignity had fallen. Quoting from the report the committee of the American Medical Association on medical education in 1852, "the conclusions regarding medical laws were simply to give protection to those measures which are calculated to secure to the community a well educated body of physicians. The medical profession should be a single body of men without any prescribed set of opinions." This fairly characterizes the medical practice act of 1926 in New York.

It is interesting to note that there was a

penalty for illegal practice in New York from 1683 to 1835, when all penalties were repealed, leaving only the provision that an illegal practitioner of medicine could not recover his debts for service by suits-at-law and later this was repealed.

In 1842 leading sections of the state concluded that the only remedy for the deplorable state of the practice of medicine was in medical reform, "by which a higher standard of medical education shall be secured." There were many medical schools in these times who licensed men whom they knew to be unworthy. In 1830, eighteen out of twenty-six states had no law regulating the practice of medicine nor laws prohibiting quackery. It was thought that the repeal of laws against quacks robbed the quack of his strong hold on the sympathies of the public. Up to 1830, eight states never had any law regulating the practice of medicine and ten states had abolished all laws pertaining to medical practice. Only four states had existing laws as far as known. In this survey replies were not received from four states which may have had them: Arkansas, Illinois, Michigan and Delaware.

The Thompsonian school had a State Society somewhere near 1850. The State Homeopathic Society was incorporated in 1862 and the Eclectic Medical Society in 1865.

There were no further medical laws enacted relating to the practice of medicine until 1872. Then a law was enacted relating to the examination by the State Board of Regents of candidates, for the degree of doctor of medicine and in 1874 another law made it a misdemeanor to practice medicine in New York unless authorized to do so by license from the Regents, or by diploma, but the trouble was to enforce it.

In 1880 a law came into effect that every practitioner had to register in the county clerk's office of the county in which he lived before October first of that year and pay a fee of twenty-five cents. This is known in New York States as the roll call of 1880 and there was not another for forty-six years or until 1926, and now there is one every year.

Can quackery be suppressed by law, or by enlightening the public of its dangers? Public medical opinion in 1844 thought the latter. In 1928 we think by law. Is the highest result to come from a combination?

The osteopaths were licensed in New York in 1907 under a minimum educational standard with restrictions as to the admin-

istration of drugs, giving narcotics or doing surgery, and the result has been to diminish the number so that today there are about three hundred in the State of New York. They have a state organization.

In 1890 the medical practice act of New York was amended so that all graduates in medicine from that time had to be licensed through examination by the State Board of Medical Examiners and those who had been in practice were licensed by registration of their diplomas.

Medical legislative effort in New York was chiefly defensive up to 1916. At that time an attempt was made to amend the medical practice act. It took ten years of work to do it. For years the state was unsuccessful in prosecuting unlicensed practitioners and one of the reasons was because the state had no proper definition of what constituted the practice of medicine. Each year some changes were made in the form of the proposed amendment by both the Department of Education and the State Medical Society in turn until the law was finally enacted in 1926.

Physicians have been largely alone in opposing the exploitation of the public by quacks and charlatans. Only in recent years have we endeavored to enlist lay support. For years our legislative activities have been almost confined to the opposition of bills of the cults—to the extent of ten or fifteen each year; and it was only in the year 1925 that the profession took steps to offer constructive legislation and adopted means to develop lay support as an aid in enacting its constructive proposals for amending the medical practice act.

In 1925 the House of Delegates of the New York State Society, by resolution, appointed a committee of seven eminent physicians selected from different parts of the state, and after four months of study of the need for change, improvement, and amendment in the then existing act, formulated the Medical Practice Act of 1926. After this it was put in legal shape by the Counsel of the Society, then, after approval by the Counsel, was submitted to the Attorney General, the Board of Regents, the State Department of Health, and the State Department of Education for suggestions. Lastly it was submitted to a meeting of the legislative chairmen of the county societies of the state, and in its final form came as near representing the opinion of the profession as any medical measure has ever done. In the legislature and at the hearing before the Governor, it was vigorously op-

posed by the organized chiropractors and drugless healers on the ground that it represented the medical trust and they appealed to the public on this ground, also that it would make their practice difficult, which was true—though the bill does not mention any cults. Much thought was given the bill in its final form in adapting it to the law, the constitution, and the established customs and methods of administration.

The Medical Practice Act of 1926 is the best practical measure that could be drawn and passed in our state. Its outstanding features are a clear definition of the practice of medicine, annual registration, a minimum educational requirement, prosecution of violators by the Attorney General's office instead of by the district attorney of the county, limiting the title "doctor" to licensed physicians, and a grievance committee.

Let us consider the grievance committee for a moment. It is made up of ten members—four from the State Medical Society, two from the State Homeopathic Society, one from the State Osteopathic Society, and three members at large of conspicuous professional standing, all appointed by the State Board of Regents. The grievance committee is similar in principle to that of the bar association. It has jurisdiction to hear and determine all charges against a physician who has been guilty of fraud or deceit in the practice of medicine; or who has been convicted of a crime or misdemeanor; or who is an habitual alcoholic or drug addict; or who has become insane; or who has been guilty of untrue or fraudulent advertising that he can cure or treat disease by a secret method; or who undertakes in any way to perform criminal abortion. The bill provides a definite method for the operation of the grievance committee.

For many years in New York State College following 1806 it was the custom of the Medical Society of the state to meet with the Governor and spend an evening with him at his mansion in order to discuss important medical legislative matters that were pending for that year. The present Governor essentially revived the custom. He was of great help in enacting the 1926 law because of his interest in public health and the illegal practice of medicine. He called a conference of the leaders of the medical profession and the official and voluntary health agencies in 1922-23-24-25 and 26 for the purpose of discussing the advisability of amending the medical prac-

tice act so as to establish a better basis for preventing cults which by this time had grown numerous—(variously estimated at upward of two thousand to five thousand)—from becoming entrenched by law—the result of constant yearly effort by the cults to have themselves licensed by the state.

The Governor further helped to create favorable public sentiment in his annual messages of 1925 and 1926. Let me read a paragraph: "Careful consideration should be given to the protection of the people of the state from unlicensed and unqualified persons practicing medicine. The co-operation of the medical profession is an essential factor in the protection of the public health as well as in the care of the sick. A very large part of modern public health is urging people to see their physicians before serious and incurable conditions have developed. Such effort comes to naught if unqualified persons are allowed to hold themselves out as physicians." This splendid statement to the legislature was of great value in the enactment of this law later in the year of 1926.

We have in our state a legislative bureau controlled by the legislative committee of the State Society. We have had since 1924 a full time medical executive officer devoting about half of his time to medical legislative matters and the other half to assisting the president, secretary, and chairman of standing committees.

Prior to 1924 the Medical Society made its contact with the legislature through the committee on legislation. Rarely did physicians appear in support of bills because the Medical Society itself, was not introducing much legislation at that time. It was chiefly on the defensive and with more or less justification for there were some bills to the disadvantage of the physicians. Most prominent among them were the efforts to secure some form of health insurance.

Since 1924 when the Society employed an executive officer, it has differently interested itself in legislative matters. The executive officer early in the session makes the acquaintance of the chairmen of the various committees, particularly the committee on public health in both houses. Through his work the county societies, by means of their committees on legislation, are informed of everything that transpires in the legislature. He endeavors to convince the members of the legislature that he represents the Medical Society of the State, that its interests are constructive and that its principal concern, in advo-

cating, or opposing bills, is the public good. He has directed opposition to bills introduced by cults, to their selfish character, to the fact that they are not an effort to improve the public good, but rather to secure legally the selfish interest of the organizations or individuals from whom the bills have sprung. Representatives of the Department of Education and the Department of Health and the State Society meet for the discussion of bills in which there is a common interest.

One of the baffling conditions prior to the appointment of the executive officer of the State Society was to find the several departments advising the legislators differently. Not a few times this difference in advice brought about defeat of measures that were worth while. The harmony of conference has been of great value and was of signal usefulness in passing the Medical Practice Act of 1926. Today the legislator looks upon the Medical Society of the State of New York as interested in the protection of the public as either the Department of Health, or the Department of Education, and we have reason to believe that he takes our interest to be as unselfish as their interests. In the past two years the important change in our legislative program is the linking up more closely with voluntary agencies whose object is the promotion of the public good. These bodies represent from five to ten per cent of the public and in activity much more than that. In the future, I believe that it will be the policy to try to enlist as representatives of the public, and staunch allies of ours in legislative work, the efforts of such organizations as the State Charities Aid Association, Parent-Teachers' Association, State Committee on Tuberculosis and Public Health, Federation of Women's Clubs, Chambers of Commerce, and the foundations interested in promoting public health activities in the state.

The choosing of legislative committee chairmen by the county societies is of great importance with regard to their personal interest and willingness and ability to give time enough to keep their own legislators informed—through their family physicians if possible—and to make an effort to get them to see that medical men are working for the public good and not for self interest; that they are trying to give the public better physicians and improve public health practice. We have in New York one special state meeting at the capital each year of the county legislative committee chairmen, the legislative com-

mittee of the State Society, the Council, and the State Society officers. A luncheon is served, railroad fares and necessary hotel bills are paid and we have a good attendance. We have been fortunate in having a governor in New York in sympathy with the advancement of public health and always willing to confer with the medical profession. Prominent physicians have always been willing to work in an advisory way with the legislative committee. This lays the foundation for the work that we have done in New York. Each year the legislature has become more friendly, due probably to taking them into confidence, telling them what we are trying to do and getting their medical constituents to tell them the same thing at home; in other words to get the public to ask for medical protection.

The campaign for the enactment of our medical practice act was greatly helped by co-operation with lay agencies as done in the past few years in other places, notably in California, Washington, and Oregon. The American Association for Medical Progress, the County Tuberculosis and Public Health committees of the State Charities Aid Association, and other welfare and civic organizations all became interested and actively supported the proposed medical act. The great strength behind this bill was the lay organizations and the fact that it was sponsored by two great state departments, represented by the Commissioner of Health, and the Commissioner of Education. Therefore, the essential factor in the passage of the Medical Practice Act was the demand for its enactment by laymen. The work of the doctors formulated the law. The great power in passing it came from laymen. During the efforts to pass the bill in 1926 legislators often expressed surprise and gratification in the interest in the bill taken by laymen. This was the first year that their constituents had told them of the popular support of the bill and that it was desired by the medical profession and the thinking public equally.

We have apparently learned some things from history. The failures in the neighborhood of 1830 to 1845 appear to be largely because the public were not with the medical profession. The success of 1926 was largely because the public worked with the medical profession. There was need one hundred and fifty years ago to regulate medical practice and to protect the public from quacks and charlatans just as there is today. We are inclined to think

that we are doing entirely new things. The fact is that we are inheritors of past accomplishments and that our present and future responsibility is the adapting, expanding and advancing of these accomplishments to our present day requirements.

The history of all professions shows that "none become highly useful and not even respectable except under restraint of its own members." If it were not that the fitness and qualification of those who may be entrusted with the cure or prevention of disease is to be determined by those trained in these subjects, then there would be little protection against the tendency of so many to accept the mysterious at the hand of ignorant pretenders. If it takes five years of training to develop a safe practitioner of medicine, then those who are willing to accept the cultist with five months of training cannot have real service any more than under similar circumstances in other fields of human endeavor.

To show you how much lay interest was aroused over the Medical Practice Act in New York in 1926, let me quote from one of many editorials in the public press: "No illegal physician can use the term 'doctor'." When the bill came to a vote it passed the Senate 35 to 12 and the Assembly 95 to 33.

The results of the Medical Practice Act were, almost at once, to drive a good many illegal practitioners from the state. It is believed by the secretary of the New York State Board of Medical Examiners that the number is about one thousand. He says that during 1927 one hundred and three cases were arrested, thirty convicted with fifty-eight cases pending, and seven hundred and twenty-eight cases were investigated. Apparently there will be as many or more this year. They have been widely distributed among chiropractors, naturopaths, physicians without license, foreign physicians who cannot obtain license, faith healers, druggists, laymen, herb doctors, naprapaths, bone setters, and licensed practitioners in the lesser fields of optometry and chiropody.

At the present time one hundred and twenty-five physiotherapists have been licensed under the law. There is a definite need of this type of technical assistant. The law does not give them permission to give medicine or treat disease except under the direction of a licensed physician. New York University is starting a four-year course in physiotherapy in association with the Hospital of Ruptured and Crippled.

Many complaints have come from adjoining states and Canada—ten large cities in the United States, four in Canada, and three in South America relative to the sudden increase in the number of quacks in their territory. Apparently this wholesale exodus from New York State is the result of its Medical Practice Act. Other states and countries have suffered. The only remedy is for other states to enact a similar or equal law.

Illegal practitioners naturally seek other places where the laws are less stringent. So far as solving a country wide problem it is not enough for only New York to enact a medical practice law. All other states must do it also if the problem is to be solved.

The illegal use of the title "Doctor" or "Dr." has been almost entirely discontinued in the metropolitan area of New York.

During the last century some new cult of greater or less prominence has come into existence about every ten years and we could look forward probably to about the same occurrence in the future. The new medical practice act with its clear definition of what constitutes the practice of medicine, furnishing an accurate list each year of licensed practitioners, and having an educational requirement as a physician in the knowledge of the human body and its diseases without prescribing any system of therapeutics or forbidding the use of anything that a licensed doctor deems of value, should be efficient for a long, long time.

An obvious task of the medical profession is to watch out that the force of the medical practice act is never weakened by modifying or repealing any of its features.

It is certain that attempts will be made in the future as unsuccessful ones were made in 1927.

In our ten years of experience in trying to get a medical practice act we learned certain lessons which I have referred to but they can be summarized in a few words:

1. It was team work that did it. It was not due to the influence of any single person. The influence of each one engaged in it was like a brick in a wall—necessary but no more so than any other one. So long as those in power could look upon the medical profession as physicians, they were listened to but there was no interest as soon as they became politicians.

2. No medical body can accomplish the passing of a medical practice act alone. It is absolutely necessary to have lay sup-

port both organized and individual to the largest possible extent.

3. Such laws must come about as a process of evolution. They cannot be enacted at once. It took New York several years to discover why it failed and to plan and accomplish its final success.

The essential features of "how it was done" are under these three heads—all else is detail.

Before closing I want to comment upon the Grievance Committee in action. The Grievance Committee is a judicial court of reference and not a prosecuting body. Its functions are to discipline licensed physicians who have violated the medical practice act and to dispose of complaints against licensed physicians based upon inadequate causes of action. It may also arbitrate between physicians or a physician and another. Charges against a physician must be drawn by an attorney or better by the State Attorney General's office. Then the charges are qualified by the Board of Regents, then referred to the Grievance Committee. The Attorney General's office is then asked for an opinion and if the case has merit, it is put in the hands of the Attorney General and each side appears by counsel. The case is the Board of Regents against the accused practitioner and not the Medical Society against the accused practitioner. The Grievance Committee really renders an opinion for the use of the Board of Regents. The results are splendid. Any case resulting in correction, when the inevitable local publicity appears, corrects dozens of others. It only takes a few scattered cases to spread all over the state. Even quasi cases where no convictions are expected, have a deterrent effect because of the necessary investigation by the court of judicial reference. The Grievance Committee divides the state into three districts for its convenience—three men sitting in each. The findings are submitted to the full committee. When decisions are reached, they are filed with the State Board of Regents.

We have a permanent administrative organization for the sole purpose of enforcing the act; differing in this respect from the medical practice act of any other state.

Perhaps it is of interest to note that in 1927 there were registered seventeen thousand four hundred and thirty physicians, three hundred and thirty-one osteopaths, and one hundred and twenty physiotherapists. The secretary of the New York State Board of Medical Examiners says that he thinks that this represents ninety-five per

cent of all those practicing medicine in 1927.

The functioning of the Medical Practice Law of New York State is working out well. It is being very carefully administered with the idea in view that it is universally applicable to the whole United States. When this is proven beyond doubt it should fill a large place in future medical practice act planning in any other state.

Through all these laws for nearly three hundred years to regulate the practice of medicine and correct its abuses, there run four things—an educational requirement, protection of the public against unqualified men, protection of the community in all medical matters, and professional dignity. These fundamental traits are plain in the first medical practice law and in the last one. These laws have all originated with physicians. Each one came into existence when there was need to correct medical abuses and I have no doubt that the physicians of each state as its needs arise, will meet the problems. New York has apparently settled its medical practice problems for a generation or two to come. There are other problems confronting us such as social medicine but that is another story.

THE JOURNAL
IS
YOUR FORUM—
WE INVITE YOU
TO UTILIZE
IT FOR THE
EXPRESSION OF
YOUR VIEWS
ON
MEDICAL SUBJECTS

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner*

HEALTH WORK IN SIXTY MICHIGAN INDUSTRIES

Michigan, with her varied and extensive industries, is a most attractive and challenging field for the study of the protection of the health and safety of industrial workers.

Medical supervision has had rapid development during the last decade. Industrial physicians and their departments have come to be recognized as important factors in the attainment of industrial efficiency and social well being. The National Industrial Conference Board, aware of the significance of industrial health work, for several years has been engaged in a study of the problems peculiar to that work.

The Michigan Department of Health is likewise interested in finding out how most adequately to handle some of its own health problems in its various industries. For this purpose it has undertaken a general survey and summary of the types of organization, the methods employed, and the accomplishments of industrial medical work now being done in the state.

As a guide or standard for consideration of merits of any features of medical service in industry, it is well to get clearly in mind the primary functions of the physician in such service, and why it is necessary and advisable to bring his knowledge and service into the plant organization.

THE INDUSTRIAL PHYSICIAN

The Conference Board of Physicians in Industry, at a meeting of the conference in 1922, outlined the following definition of the medical man who devotes his time or part of his time to industry:

"The physician in industry is one who applies the principles of modern medicine and surgery to the industrial worker, sick or well, supplementing the remedial agencies of medicine by the sound application of hygiene, sanitation and accident prevention; and who, in addition, has an adequate and co-operative appreciation of the social, economic and administrative problems and responsibilities of industry in its relation to society."

In an article on "Preventive Medicine in

Industry," in the Journal of the American Public Health Association for October, 1924, Dr. Guy L. Kiefer comments as follows on this subject:

"Accepting this definition as describing the work of the physician in industry, it is evident that preventive medicine has a place there. Industrial medicine is developing, just as preventive medicine has developed, to the point where its chief work and the chief duty of its physicians is educational. It is observed that as preventive medicine and industrial medicine develop they draw more closely together. There seems to be no better place to work out the latest phase of preventive medicine than in a well organized industry. Here is a group that can, if the employer so will, be controlled sufficiently so as to be taught how to keep well. It can be kept under observation to such an extent that the results obtained can be easily tabulated. It is to be borne in mind, however, that the labor turnover, which exists to some extent in every industry, will interfere with the preventive program."

Following Dr. Kiefer's recommendation that to accomplish the best results there should be some well defined functions of the health department of an industry; certain objectives were outlined and presented to several establishments as primary activities in which they might engage. It is understood that their relative importance varies in different types of industries and under different conditions. In several of the larger industries with fully developed health departments, there has been considerable expansion of these suggested activities.

FUNCTIONS OF AN INDUSTRIAL HEALTH SERVICE

The following nine objectives are recommended as comprising the chief functions of a fully developed health department in industry:

1. Physical examination of all applicants for positions in the industry, and of workers returning to work after illness.
2. Periodic re-examination of all employees; more frequent attention to those who have physical defects needing follow-up.
3. The examination of any and all em-

ployes who may be indisposed, for the purpose of diagnosis and advice.

4. Examination, upon request, of all employes who may be under care of an outside physician, for purposes of co-operation and consultation.

5. The surgical care, as far as possible, of all company accident cases.

6. General health education by means of literature, posters, bulletins, lectures, etc.

7. General supervision of plant sanitation, including such matters as ventilation, heating, food inspection, etc.

8. Investigation, by nurses, of all sick cases, and general nursing care and advice, as far as possible, of all such cases.

9. Instruction in Mouth Hygiene and Care of the Teeth.

Examination of all applicants upon admission is for classification and as a matter of record; the procedure proves to be of great benefit both to employe and employer.

It is recommended that facilities of industrial medical departments be placed at the service of attending physicians whenever they desire it; X-ray and other laboratory examinations should be made at their request, for employes of the particular industry, and results placed at their disposal.

This survey covered 60 industries ranging in number of employes from 150 to over 30,000. The number of employes totaled 223,290 of whom 17,497 were women. No particular preference was shown in choosing industries to be visited except as they were considered representative of the various types from which could be learned the full scope of measures and methods employed in the care of injured and ill employes, not including accident prevention devices.

The nine proposed objectives were discussed, information was secured on the nature and extent of health work being conducted, and reactions were noted as to the relative value of various health measures and as to the desirability of attempts at standardization.

The survey was intended to cover items on staff, equipment, physical examinations, relations with family physician, safety measures, welfare program, cost of health service, and benefits derived. The following tabulated items were gathered from 45 establishments where at least four of the nine objectives were being promoted; the other 15 have no health service or it is of

such limited nature that no data can be used in comparison.

ITEMIZED REPORT

There are 40 full time physicians employed in 18 establishments, and 26 part time physicians in 17 establishments. Twenty-eight companies have arrangements with physicians "on call."

A total of 116 trained nurses are employed in the industries visited. Nine establishments report that their nurses do visiting work, while five state that they depend upon the local visiting nurse associations or the Metropolitan Life Insurance Company for such service.

Thirty-four first aid workers are employed in 14 establishments. Most of these are in plants where there is little or no medical or nursing service. In a few plants classes are conducted, usually for foremen, in special types of first aid work.

EQUIPMENT

Waiting rooms for patients are maintained in 28 plants, doctors' offices in 15, special examining rooms in 17, separate dressing rooms in 20, special rest rooms for patients in 8, and first aid rooms, only, in 9. Seven establishments have X-ray rooms, 7 have physiotherapy rooms, 3 have dental rooms and equipment, 5 have optical rooms, and 12 have laboratories. Ten plants have emergency hospitals, while 17 report arrangements with city hospitals.

Ten plants have dispensaries open day and night, 15 have such service during the day, and 6 have them open only during working hours.

Records of medical cases are kept by 38 plants, and surgical records by 43 plants.

PHYSICAL EXAMINATIONS

Twenty-two firms examine every applicant entering their employ, 19 examine all employes complaining of illness, and 6 examine those returning to work after illness.

Periodic examinations for all employes are conducted in 4 plants, while 8 report giving special re-examinations ranging in time from 6 months to 5 years.

Thirty-two health services stated that they stressed cooperating with the family physician, often helping to make it possible for the physician or a specialist to give the service needed.

COST OF PROMOTING HEALTH SERVICE

Varying estimates were made when this item was discussed in the plants. Less

than half of the questionnaires returned contained any data on this. Figures reported range from \$4.40 to \$15 per employe per year. Taking the total number of employes in firms reporting and their reported costs, the average is found to be \$6.58 per employe. This item needs more attention before figures can be sent out as a true statement of the cost of health work in Michigan industries. Every firm reported the investment well worth while.

BENEFITS DERIVED

Nineteen firms reported less time lost, 22 stated that there was a decrease in labor turnover, and 8 commented on general benefits. As to employes, 12 firms reported marked improvement in efficiency, 8 reported increased income, and 15 stated that there was marked effect on the general morale of the workers.

All of the industries surveyed gave the representative of the Michigan Department of Health a most cordial reception. The officials offered helpful recommendations, were glad to receive suggestions, and in almost every case manifested a desire to extend the medical service.

F. A. P.

PROBLEMS OF ETHICS IN THE LABORATORY

It is our intention at all times in the laboratory of the Michigan Department of Health to give as near complete service as is consistent with good laboratory practice. Many times we are called upon to do things that yield little or no information that is useful as an aid to the diagnosis of the disease. Questions dealing with technical procedures we have no difficulty in handling. The most troublesome problems we have to solve in giving laboratory service are those that arise out of medical ethics. Our results are the property of the physician sending in the specimen. Following are instances that came up in one day's business.

A physician from Duluth has a patient that was formerly treated by a Michigan physician. He writes asking for the data as to previous laboratory findings while the patient was being treated by the Michigan doctor. Our files were searched and it was found that the man had had a positive Kahn test, and ninety days later a negative Kahn test; presumably the man was treated between the two examinations. He was now appearing for a physical examination and further treatment in the office of the Minnesota physician. In due

time permission was granted by the Michigan physician and the original results were sent to the Duluth doctor.

A patient from a local doctor called at the laboratory, stating that her physician had told her that the laboratory had made a diagnosis on her blood specimen of encephalitis lethargica. In the meantime she had changed physicians, and had gone to the hospital of the University of Michigan where they had questioned the diagnosis and asked for a copy of the laboratory report. As no such laboratory finding is possible, we met the situation by telling the patient that we felt certain that she had misunderstood her doctor and that the results would be looked up and mailed to her first physician on whom she could call and get straightened out as to exactly what he had said when he had given her the report some weeks previous. A letter was written to the local physician telling him of this conversation, sending him a copy of the former result and telling him that we had informed his former patient that she had misunderstood him, thus giving him an opportunity to correct an impression that the laboratory was making impossible diagnoses and to straighten out his own position in the matter.

There is a state law which requires that all children for adoption must have a record of being free from serological evidences of syphilis. The Michigan Childrens Aid Society had a child in the southern part of the state whom they wished to place for adoption. The foster parents informed the agent of the Michigan Childrens Aid Society that a blood specimen had been examined on this child and had been sent in by a physician in their community. The social worker from the society called on this doctor and for his own reasons, he refused to give the results. They, therefore, wrote us. As the results we had on file were the property of the physician and could not be given out after having been denied, we informed the Society that if they wished to take the child to another physician we would report on the new specimen.

An irate tax-payer, a woman, appeared at the laboratory and demanded to see the results of the blood test made by a physician in a near-by town. The physician had made a diagnosis of syphilis. Our records revealed the fact that the patient had a negative Kahn test. The diagnosis was undoubtedly made on clinical findings, and in all probability it was a case of neurosyphilis. The report was denied on the

grounds that it was a privileged medical communication.

Another instance of similar nature came in from northern Michigan in which a diagnosis of tuberculosis had been made, and the repeated specimens examined in this laboratory were negative, a common enough occurrence. The law which states that venereal disease records are not public records does not apply to other laboratory findings so again we had to resort to the scheme of sending the results to the physician, stating that the patient had called at the laboratory and demanded the reports. We told the patient that we would send the reports to the physician as the patient told us that the physician had told him he had lost the reports.

The most frequent requests that we have come from a physician who is called upon to render service to a patient who has changed doctors and the patient informs the doctor that results were formerly obtained from the laboratory and the doctor writes to the laboratory for these results. We are always willing to make additional examinations for any physicians under these circumstances, but cannot transfer one physician's results to another without the permission of the one who sent in the specimens. We take this position because we believe fully that laboratory findings should be used only as an aid to diagnosis and that a positive or negative finding does not in any way overthrow competent clinical findings.

A DIPHTHERIA STUDY

A study of the incidence of diphtheria in the various sections of the state has just been completed by the Bureau of Epidemiology.

During 1926 an intensive campaign was conducted by the State Department of Health to immunize as many as possible of the school children of 14 counties. The counties selected were those especially interested in having the work done.

Toxin-antitoxin was administered by the local physicians in Lapeer, Barry, Wexford and Oceana Counties. In Ionia, Washenaw, Cass, Presque Isle, Ogemaw, Montcalm, Baraga, Alger, Kent and Genesee Counties representatives of the State Department of Health gave the treatments.

Reports for the year 1927 gave the first indication of results from this intensive campaign. The diphtheria death rate for all counties of the state except the fourteen mentioned was 11.7 per 100,000 population. This is lower than the rate for 1926

and probably reflects the increasing use of toxin-antitoxin by physicians in their private practice.

In the 14 counties where general immunization was carried on, the diphtheria death rate was 5.9 per 100,000 population.

This study would seem to indicate that immunization of the school population against diphtheria will reduce the diphtheria death rate one-half. In the four counties where local physicians administered the toxin-antitoxin only six deaths from diphtheria occurred throughout the entire year, and none of them were among school children who had been given toxin-antitoxin. A similar condition prevailed in the ten counties visited by department representatives.

Grand Rapids had only two deaths from diphtheria during 1927, with a population of 150,000. The remainder of Kent County with a population of about 50,000, only three deaths occurred. This is undoubtedly one of the best diphtheria records ever maintained by any Michigan city or county.

DR. KAHN TO LEAVE DEPARTMENT

Dr. R. L. Kahn, Assistant Director in charge of Immunology in the Bureau of Laboratories of the Michigan Department of Health, has recently received appointment to the University of Michigan faculty as Director of the University Hospital Laboratory and Assistant Professor of Clinical Bacteriology and Serology in the Medical School. His resignation from the Bureau of Laboratories will take effect August first.

Dr. Kahn has had charge of serum diagnosis of syphilis in the state laboratories since joining the staff in February, 1920. He will be retained by the Michigan Department of Health as consultant serologist. Researches in progress will be continued by Dr. Kahn and Dr. Lubin.

Dr. Grace Lubin, Ph. D. (Johns Hopkins) will have charge of the serological work of the laboratories when Dr. Kahn leaves for Ann Arbor.

WEXFORD TO HAVE COUNTY HEALTH UNIT

At a meeting of the Board of Supervisors of Wexford County on April 12 plans were made and a budget adopted for a county health department. The Wexford County Medical Society sponsored the program, and the unit as planned will be a combined department functioning in both city and county.

The personnel will consist of a health

officer, three public health nurses, and an office assistant. Quarters have been arranged for in the Court House.

It is hoped to have the department organized and at work by the time schools open in September.

The Ionia-Montcalm Medical Society at their meeting on April 12 received the report of their committee appointed to discuss county health units, and voted to ask the State Department of Health to present the matter to the Board of Supervisors at their next meeting.

PREVALENCE OF DISEASE

	April Report Cases Reported				Av. 5 Yrs.
	March 1928	March 1928	April 1927		
Pneumonia	1,039	1,068	663	805	
Tuberculosis	436	517	554	587	
Typhoid Fever.....	19	23	29	36	
Diphtheria	282	230	409	399	
Whooping Cough.....	663	581	536	659	
Scarlet Fever.....	1,143	1,080	1,078	1,371	
Measles	5,839	6,212	1,027	2,931	
Smallpox	154	132	120	89	
Meningitis	16	22	13	14	
Poliomyelitis	2	1	0	2	
Syphilis	1,448	1,121	1,449	1,285	
Gonorrhea	735	558	729	788	
Chancroid	6	6	15	14	

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health
April, 1928

	+	-	+-	Total
Throat Swabs for Diphtheria.....				917
Diagnosis	28	241		
Release	26	164		
Carrier	12	434		
Virulence	5	7		
Throat Swabs for Hemolytic Streptococci				589
Diagnosis	59	92		
Carrier	23	415		
Throat Swabs for Vincent's.....	34	235		269
Syphilis				7813
Kahn	1124	6635	50	
Wassermann	1	2		
Darkfield		1		
Examination for Gonococci.....	123	1499		1622
B. Tuberculosis.....				509
Sputum	75	377		
Animal Inoculations.....	5	52		
Typhoid				108
Feces	8	41		
Urine		7		
Blood Cultures.....	1	21		
Widals	3	27		
B. Abortus.....	3	43		46
Dysentery				33
Intestinal Parasites.....				18
Transudates and Exudates.....				180
Blood Examinations (not clas- sified)				207
Urine Examinations (not clas- sified)				357
Water and Sewage Examina- tions				458
Milk Examinations				85
Toxicological Examinations.....				7
Autogenous Vaccines.....				
Supplementary Examinations..				179
Unclassified Examinations.....				552
Total for the Month.....				13949
Cumulative Total (fiscal year)				133550
Increase over this month last Year				820
Outfits Mailed Out.....				16045
Media Manufactured, c.c.....				340814
Antitoxin Distributed, units.....				19626000

Toxin Antitoxin Distributed, c.c.	27930
Typhoid Vaccine Distributed, c.c.	750
Silver Nitrate Ampules Dis- tributed	5436
Examinations Made by the Houghton Laboratory.....	2249
Examinations Made by West- ern Michigan Division Lab- oratory, Grand Rapids.....	6646

OXYGEN-CARRIER OF THE BLOOD

An important step toward the understanding of how the process of breathing sustains life has been made by Prof. Otto Warburg who, in an address before the Kaiser Wilhelm Association for the Advancement of Science at Berlin, demonstrated the constitution and action of the ferment in the blood which controls the conveyance of the oxygen of the air from the lungs to the muscles. So minute an amount of this ferment or catalyst is present in the blood that it cannot be isolated, yet it is an essential factor in the supply of vital energy to all animals. Its chief constituent is haemin, a chemical compound which has been known for the last seventy-five years, but which was first made artificially in the laboratory a few months ago by Prof. Hans Fischer. It contains iron and is a component of the familiar red coloring matter of the blood, haemoglobin.

But the ferment is ten thousand times more sensitive to light than haemoglobin. The color of the light makes more difference than its intensity. Rays of a certain frequency will be absorbed while light of another wave length, will not affect it. These iron-containing compounds of the blood are tuned to react to select radiations like a fine radio apparatus. One of the derivative compounds can act as a sensitizer to sunshine so that a person taking a dose of it would be light-struck, perhaps fatally, by ordinary daylight, while he would be all right so long as he remained in a dark room. Pigs are sometimes so sensitized by eating buckwheat as to be sickened by sunlight.

The "breath-ferment" described by Warburg is beneficially affected by light, for when it is poisoned by combination with carbon monoxide such as may come from automobile gases, the combination is readily broken up by faint light, and the ferment can then resume its function of carrying oxygen.—Science Service.

THE PHYSICIAN

There are men and classes of men who stand above the common herd, the soldier, the sailor, the shepherd not infrequently; the artist rarely; the physician almost as a rule. He is the flower of our civilization, and when the stage of man is done and only to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period and most nobly exhibited virtues of the race. Generosity he has, such as is possible to those that practice an art, never to those who drive a trade. Discretion, tested by a hundred secrets, tact tried in a thousand embarrassments and, what are more important, Herculean cheerfulness and courage.—Robert Louis Stevenson.

A gentleman was walking down the street with a little boy at his side, when the boy cried out: "Oh, pa! there goes an editor!"

"Hush, hush," said the father, "Don't make sport of the poor man, God only knows what you may come to yourself some day."

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JUNE, 1928

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

IS THIS OUR PROBLEM?

Michigan is an industrial state and consequently has its special problems. Among these is the conservation of man power. In the large industrial centers men are apt to be cast aside at a comparatively early age. It has been stated time and again that it is difficult for a man past fifty years to obtain employment, particularly in the large automobile factories. Complaints are also made that the speed which is maintained in the name of efficiency produces nervous manifestations with consequent impairment of health. There is no doubt that in the industries in the large cities in particular, man is subject to more continuous nerve strain than at any time in the past. We have not only our immediate problem, but the influence of industrial life on the race is a larger though more remote one.

Modern industry, while it has greatly increased man power, has made work much less attractive. The time was when men took a certain pleasure out of their work. They were craftsmen and many of them

artists as may be seen in old buildings, old furniture and other articles of handicraft of former generations. The industrial age has done away with all this. Now everything is sacrificed to speed and efficiency. Art has been taken out of the workman's life. It is no longer "each for the joy of the working." The worker instead of obtaining satisfaction from his work, looks to the time when his day's work is over. Since a great deal of it requires little or no skill, he may be replaced easily at any time by anyone else. He is therefore living in an atmosphere of insecurity. It is estimated that there are from two to four million persons out of work in the United States, almost double the number who are continually out of work in England.

Much has been written about the iron man. It is high time that attention were paid to the human machine—much as we hate to use the term. Medical and sanitary science has effected the prolongation of life until the average age is approximately fifty-six years. Why prolong life if industry is to cast it aside long before the climacteric is reached?

Then to detract further from the morale of the worker we have the element of so-called scientific management with its tendency to depersonalize. Overorganizing of industry has a dehumanizing effect upon men. To feel that one is near the "zero of insignificance," to be a mere cog in a wheel, is in direct opposition to what might be considered a primal urge in man—the desire to persist as a personality. Human nature resists any condition that tends to degrade.

Political statesmanship we know, though sometimes there is far too little of it exercised. The state is in dire need of industrial statesmanship. Our mechanical devices are nearly perfect. Science has done her part but the art of controlling men in their own interests is in its infancy. In other words we have increased our power over nature without increasing the control of that power over thought and management. Industrial statesmanship must take into consideration industrial psychology. Among other things this will mean the elimination of the so-called "straw boss" who acts as a buffer between the foreman and the worker, and it should include better treatment of the latter.

As has been said, great attention has been paid to the mechanics of industry; greater attention must be paid to the human factor. In a large way this includes the well-being of the worker, the health of

his family and his peace of mind. Probably there is no class so able to lead in this matter as the medical profession. The members are to a large extent individualistic and independent. Their own future however, is affected largely by the conditions which prevail in industrial life.

BUSINESS MANAGEMENT OF COUNTY MEDICAL SOCIETIES

Some of the largest county medical societies of the United States have adopted the idea of business management secretaries who may or may not be medically trained persons. Both the Toledo Academy of Medicine and the Cleveland Medical Society have full-time business managers neither of whom is a physician. The idea is being discussed somewhat informally by members of the Wayne County Medical Society, more particularly by the officers who are in most immediate touch with the problems confronting the Society. In a Society such as Wayne County the duties of the president and secretary have become so onerous as to require more time than the average person in active practice can afford to devote to them. Sooner or later other societies of the state will find it to their advantage to consider the problem of some sort of business management, full time or other.

It is fitting that the County Society of large membership should be the first to adopt such a measure in as much as it is the primal unit of organized medicine. Membership in the County Society is the necessary condition of membership of the Michigan State Medical Society and of the American Medical Association. Besides, the majority of the problems of a medical society are local and can be best solved by local effort. The medical profession of large cities have grievances which become almost periodically recrudescient.

The success of a full-time managerial secretary will depend upon obtaining the right kind of a man to fill the position. It will require a man with influence and an extraordinary share of sound common sense.

The so-called social worker is busy and sometimes develops such a facility of speech as to give him influence in a community out of all proportion to the value of any services he is able to render and that influence is not likely to be in the interest of the medical profession. If a live business manager did no more than offset the effects of these busy bodies he would have earned his salary.

VACATION

The vacation season has arrived. Probably none is more in need of it than the doctor. A year of contact with physical ailments, or ministering to minds diseased, or plucking from bosoms rooted sorrows, results in a condition that is none too wholesome. We need a change. The opportunity to attend various medical conventions is in the right direction but it does not go far enough. A change of scene is necessary. The physician in the city should hie away to the country and the country confrere would do well to subject himself to a couple of weeks in the metropolis. He will at least appreciate his rural surroundings when he returns.

Men in any walk of life should be on their guard against becoming stale—intellectually sterile. When the lawyer becomes so he loses his cases and eventually his clients; when the doctor ceases to grow mentally, the condition becomes serious to his patients; when the clergy and editors become stale everybody knows it. June is the time to get back to nature, if one is not to lose the capacity to appreciate what nature has to offer. All work and no play is a trite but true saying, so,

"If your nose is close to the grindstone rough
And you hold it down there long enough,
In time you'll say there's no such thing
As brooks that babble and birds that sing,
These three will all your world compose:
Just you,—

The stone,—

And your darned old nose."

MEDICINE AND THE PRIVATE CITIZEN

Few stop to think how intimately medical science is associated with the people of a community. No one may maintain a nuisance on his property or any condition that is a menace to the health of his neighbor. If one's neighbor has a child ill with a contagious disease it is the immediate concern of those living near, as well as the remote concern of the municipality, that the house be placed under quarantine and that the patient receive proper treatment. In the apprehension of disease none but a properly qualified physician can do the work. Public opinion will not accept the diagnosis of a cultist. In the event of a severe epidemic, reliance is placed upon the medical profession to rid the community of the scourge.

The great war is too near to require more than mention of the tremendous services rendered by the medical profession.

Here the cultist and the irregular healer had no place.

One of the cults made the claim during the influenza epidemic of 1918 that it had a smaller mortality than even the regular medical profession. The reason is obvious. People may consult the cultist or the charlatan in minor ailments but when one is the victim of real illness the doctor is the person who is consulted.

Furthermore the almost universal adoption of the idea of medical education by the state shows that the people collectively recognize the importance of trained men to care for the sick.

While the importance of scientific medicine is recognized almost universally, even by those who at times show a lack of confidence in medicine in favor of charlatanry, the achievements of the former require to be kept constantly before the public.

CULT PRIVILEGES

A correspondent writes asking whether a registered osteopath has the right to treat contagious diseases or to issue death certificates. The law of this state grants that right or privilege to osteopaths. The same correspondent also wonders what would happen if a regular M. D. were to practise osteopathy. Nothing would happen in as much as a member of the regular medical profession is limited only by his judgment and common sense in the use of therapeutic measures.

While on the subject another query is in regard to the right of chiropractors to use the X-ray in diagnosis of vertebral conditions, and likewise the use of the ultra-violet rays in treatment, according to the Michigan law. A chiropractor is not licensed as a chiropractor in the state of Michigan, therefore as such has no rights whatsoever. As a drugless healer, however, and licensed as such, he would have the right to employ any kind of therapeutic agent so long as that agent did not involve the use of drugs either externally or internally. Such is our interpretation of the law.

Drugless therapeutic agents such as the X-rays, radium, the various agents used in physiotherapy require as much skill and training to insure their proper use as drugs do, and in the hands of incompetents who have not a standard medical training, are capable of as much harm as drugs prescribed by incompetents.

It is said on very good authority that many chiropractors are not limiting them-

selves to drugless methods but are actually employing medicinal agents. This charge has been alleged by the proprietor of a very prominent school of chiropractic who ought to know. He claims that graduates of the institution are drifting from the original purpose of the school. Of course the various cults adhere for a time to the tenets of their schools then eventually endeavor to enter the legitimate field of medicine by the back door.

APPENDICITIS

It would seem that the last word on appendicitis had already been said. Probably no other subject has been so widely and so thoroughly investigated over the past four decades. It is almost universally admitted to be a surgical disease. Its incidence has been presumed to be greatest among young adults between twenty and thirty years of age, gradually becoming less frequent after the attainment of middle life. The reason at least in part is the almost universal attention to abdominal pain with operative treatment. The exuberance of youth is not conducive to care in the selection of diet and to meticulous attention to habits of living that age compels in the person who is approaching the grand climacteric. Fitch* has investigated with the object of ascertaining the frequency of the disease in persons past fifty. Basing his study upon 766 consecutive cases he found that appendicitis is as common in people over fifty years of age as it is in children under ten. The greatest number of cases, 40.8 per cent, occurred between the ages of twenty and thirty; between ages ten and twenty years was the next highest percentage, namely 21.4. About 5 per cent of cases of appendicitis were in patients over fifty and 5.5 per cent in patients under ten.

Fitch followed up his own investigation by sending a questionnaire to one hundred surgeons and hospitals in sections of country wide apart so that his statistics may be taken as representing a cross section of occurrence of appendicitis in persons over fifty years of age. The percentages range from 4.2 to 10 per cent; 90 per cent of the cases occurring under that age. While appendicitis has been found comparatively less frequent after the age of fifty the attacks are reported as of greater severity with more extensive pathological findings and more pronounced circulatory changes than in cases under that age. It follows

* "Appendicitis in People Over Fifty Years of Age," by Emery M. Fitch, M. D., New England Journal of Medicine, April 5th, 1928.

that the mortality after the half century mark is much greater.

ARE WE FINDING TUBERCULOSIS?

The medical director of a large sanatorium of the middle west has recently gone over the record of 7,000 patients who have been admitted to that sanatorium during the past 12 years. These patients, of all ages, from every walk of life, and of every race and creed, came to the sanatorium seeking recovery. Many came too late. Eighty-five per cent of the 7,000 cases were admitted in an advanced stage of tuberculosis.

These 7,000 records clearly tell that a majority of these patients knew that they were ill months before coming to the sanatorium. Many of the records show that there was a time when the patients felt tuberculous. They felt tired, they were nervous or irritable, or had indigestion. Tuberculosis was not even then suspected by the doctor, whose opinion was sought.

These 7,000 records tell of advancing disease to the stage when slight afternoon fever, loss of weight, and cough developed. At this time a thorough chest examination would have settled the diagnosis. But the warning went unheeded.

The disease advanced, and for months before entering the sanatorium these patients were coughing and expectorating in home and factory, scattering tubercle bacilli. Finally the diagnosis was made and sanatorium treatment arranged for. Eighty-five per cent came too late.

Since tuberculosis is very wide spread and since cases often extend over a period of two or three years, why should we not have in mind that the patient who comes to us for examination may be suffering from that disease?

E. R. Van der Slice.

EDITORIAL NOTES

"To cure sometimes, to alleviate often, to comfort always."—Anon.

"Lo, the winter is passed,
The summer is over and gone;
The flowers appear on the earth;
The time of singing of birds is come,
And the voices of spring are heard in the
lands."

The big Post-Graduate Conference in Detroit is in progress as The Journal M. S. M. S. goes to the printer. Every effort is being made to print as many of the clinical addresses as can be obtained. These will appear in the July and August numbers.

Our Peers: The Magna Charta of time honored fame has decreed to the effect that no man shall be tried, fined or imprisoned except by the lawful judgment of his peers. A Pennsylvania judge has expressed as his opinion that juries of medical experts should sit on all murder trials in which the plea of insanity is made. If we were good at repartee or disposed to be "catty," what might we not say to this?

A Bad Taste in the Mouth: The Manchester Guardian is very much concerned over the action of the United States government in instituting an inquiry into the alleged conspiracy to control the price of quinine. Large, concealed supplies of the drug have been seized and confiscated. On reporting these facts to our own special catarrh expert, comments the Guardian, he replied with a contemptuous sneeze, "I dode see whad they're baking all the fuss about. They cad have all the quidide if they wad it—the dab stuff's no good ady-way!"

"I hav finally cum to the konklusion that a good reliable sett of bowels is wurth more tu a man than enny quantity of brains."—Josh Billings, quoted by Alvarez in his new book, *The Mechanics of the Digestive Tract*.

Dr. Lawrence Reynolds of Detroit has been appointed associate editor of the *American Journal of Roentgenology*. The appointment is a very happy one as no one is better qualified for the position than Dr. Reynolds. He is not only widely read in the vast literature on Roentgenology that has been produced during the past thirty-three years since the discovery of the X-rays, but has a rare command of the English language which admirably fits him for the editorial position. The American Roentgenological Association is to be congratulated on the appointment.

A resolution was passed recently by the Erie County (Buffalo) Medical Society, claiming among other things that the Buffalo City Hospital had pauperized the public until there was a horde of people expecting treatment and hospital care free,

establishing a custom that it would take years to overcome. This custom was condemned by the profession, the resolution declaring further that state or socialized medicine was in the last analysis beneficial to neither the public nor the medical profession. This problem in some form or other must be faced by the medical profession of every large city.

The adoption of a motto places this Journal among the ancients so to speak. The New York Evening Post started with the following declaration from the first number in 1801; "The design of this paper is to diffuse among the people correct information on all interesting subjects, to inculcate just principles in religion, morals and politics, and to cultivate a taste for sound literature." This paper was under the editorship of William Cullen Bryant, the poet, for about half a century. The staid North American Review with over a century to its credit, rings an impartial note in, "Tros Tyriusque mihi nullo discrimine agetur." The Toronto Globe holds before its readers the following slogan of freedom; "The subject who is loyal to the Chief Magistrate will neither advise nor submit to arbitrary measures."—Junius. It is not the purpose of the Journal of the M. S. M. S. to start any uplift movement or to indulge in hortatory homilies. The quaint Baconian sentence, however, requires no apology. It conveys a truth that is at times not so fully realized as it should be.

JUNE TWENTY-FIVE YEARS AGO

The Journal M. S. M. S. of 1903 contained papers on Impetigo by Dr. William F. Breakey, Ann Arbor; the Etiology of Pelvic Inflammatory Diseases by Dr. Richard R. Smith, Grand Rapids; The Conservative Treatment of Pelvic Inflammatory Diseases by Dr. R. E. Balch, Kalamazoo; Boiling as a Method of Sterilizing Catheters by Doctors C. B. Nancrede and W. H. Hutchings, Ann Arbor; and Mydriatics in Refraction of Presbyopia by Dr. O. A. Griffin, Ann Arbor. There are listed fifty-five county societies embracing seventy-one counties with a membership of 1700. Dr. William F. Breakey was president of the Michigan State Medical Society.

ONE HUNDRED AND SEVEN YEARS AGO

The semi-annual meeting of the medical society of the Territory of Michigan was held at the house of Henry O. Bronson, Detroit, Mich., June 12th. There were a number present. Dr. William Brown who presided at this meeting was the first president of the society. One of the earliest acts of the Michigan Medical Society was the appointment of an attorney whose duty would be to "prosecute all infractions of the statutes made, adopted and provided for regulating the practice of physic and surgery within this Territory." The

early meetings of the Michigan Territorial Medical Society were concerned more with the legal than the scientific aspects of medicine.

"EACH IN HIS OWN TONGUE"

When the sick man lies abed distraught with pain,
And dismal Death is clutching at his throat,
He likens me to GOD and all his house
Kneel down and do me reverence.

When easier lies his head and icy death
Removes his hand and warm the blood rebounds,
He blesses me as Messenger of God
And Holy ANGEL from ethereal high.

But when the full and rosy touch of life
Bestirs his flesh and puts his soul to sleep,
He greets me as a MAN, though one of might
And versed in all the wisdom of the world.

And then at last when recompense is asked,
He passeth me in dread, for lo, to him I stand
A DEVIL, horned from out the lowest depth.

—Anon. From the Dutch.

Very Ill—

Name, oh doctor, name your fee,
Ask—I'll pay whatever it be—
Skill like yours I know comes high,
Only do not let me die.
Get me out of this and I
Cash will ante instantly.

Convalescent—

Cut, oh doctor, cut that fee,
Cut, or not a cent from me.
I am not a millionaire,
But I'll do whatever's square,
Only make a bill that's fair.

Well—

Book, oh doctor, book your fee,
Charge, I'll pay futrely.
When the crops all by are laid,
When every other bill is paid.
Or when death again afraid,
I will pay it—probably?

—Anon.

Blow, blow thou winter wind,
Thou art not so unkind
As man's ingratitude;
Thy tooth is not so keen
Because thou art not seen
Although thy breath be rude.

Freeze, freeze thou bitter sky
That dost not bite so nigh
As benefits forgot;
Though thou the waters warp
Thy sting is not so sharp
As friend remembered not.

—Shakespeare, "As You Like It."

THE READER, THE CONTRIBUTOR, THE EDITOR

It is the duty of an editor: (1) to judge impartially in the selection of material for publication; (2) to consider the interest of the reader as paramount; (3) to maintain the high standard for medicine that it has had in the past; (4) to fight ignorance, quackery and fraud, not only by a campaign of silence but openly and continuously; (5) to refrain from personal laudation, and to publish

nothing that will aid the individual seeker of the limelight in his ambitions; (6) to be guided by good English style and diction but to avoid fancy writing and rhetorical bouquets; (7) to be first with the most important articles and scientific news; (8) to be interesting—above all, to be interesting.

It is the duty of a contributor: (1) to be brief; (2) to be as careful in literary publication as in surgical operation; (3) to publish only when you have something new to say or something old to say in a new way; (4) to contribute only to those publications in which the products of your brain will be associated permanently with commercial matter equally clean; (5) to provide an adequate summary and conclusions; (6) to select a title

that expresses the meaning of your article; (7) to make citations only to medical literature that has actually been consulted; (8) to eliminate carefully unnecessary charts, tables and illustrations; (9) to be as clean in writing and revising as in the hospital clinic; (10) to be interesting.

It is the duty of the reader: (1) to be interested; (2) to support sound publications by subscription; (3) to avoid derogatory criticism unless all of the facts are apparent; (4) to purchase approved products of merit advertised in sound publications; (5) to suggest improvement when the need is apparent.

—Morris Fishbein, M. D., On Medical Journalism in the United States.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. L. J. Hirschman of Detroit delivered an illustrated address before the Medical Association of the State of Alabama on "The Surgical Management of Ano Rectal Fistulas."

Dr. Robert Beattie and Mrs. Beattie of Detroit, are making a voyage around the world. The doctor reports only one day of rough weather during the voyage.

Dr. S. E. Barnett of 25 Parsons street, Detroit, after spending five months of post-graduate study in eye, ear, nose and throat in Vienna, is leaving for the United States on the S. S. Republic May 23.

Dr. Victor C. Vaughan, former dean of the medical school of University of Michigan, has been awarded the Kober medal for general distinction in medical work at the closing session of the Association of American Physicians.

Dr. H. J. Carstens, speaker of the House of Delegates, M. S. M. S., has been reported last in France on his way to Paris. He is traveling in a somewhat unspectacular way, having taken his Hup roadster with him, with which he is touring the continent.

Dr. Robert S. Stone of Detroit, who has been associated for the past three years with Dr. Rollin Stevens, will leave shortly for California, where he has secured a position as professor of roentgenology in the medical department of the University of California.

The aim is to include in this department such news items which it is hoped will be of interest to the membership of the M. S. M. S. as a whole. It can be made a more interesting feature if the members will co-operate by sending similar items from their immediate environment.

At the last meeting of the Detroit Oto-Laryngological Society the following gentlemen were elected officers for the coming year. Dr. William Fowler, president; Dr. Alex R. McKinney, vice-president; Dr. Don A. Cohoe, secretary-treasurer; Doctors Ray Connor and I. Wendell, Council

members. These men are now planning for another big year's work. Some of the most noted Oto-Laryngologists of the country will be brought here this year.

The new unit of Harper Hospital, Detroit, Mich., was formally opened May 15th. It has been completed at a cost of \$2,500,000, which sum includes also alteration of the old building. The capacity of Harper is now 650 patients. Harper Hospital was founded in 1863 as a government unit for the care of soldiers wounded in the Civil War. The old Harper, in which many physicians of Michigan served their internship, faced on John R. street. The new Harper faces on Brush street. It is almost needless to say that the new hospital is almost the last word in hospital innovations and conveniences.

A new building, more than 600 feet long and six stories high, will be added to the Detroit laboratories of Parke, Davis & Co., according to an announcement recently made public. This structure, which will be devoted to manufacturing, will embody the latest improvements in factory construction and design. It will be of reinforced concrete throughout, with every provision made for the health and convenience of the employees. The exterior of the building will be faced with brick to correspond to that of the administration building which was completed last year. The new building will be constructed in three units and it is expected that the first unit will be ready for occupancy on January 1, 1929.

The race suicide outlook in the United States is not yet painfully apparent, judging by the latest statistical study of sterility reported to the National Academy of Sciences. From data furnished by the U. S. Bureau of the Census, Dr. A. J. Lotka of the Metropolitan Life Insurance company has computed that the percentage of childless marriages among white people in America is 17 per cent. About 4 per cent of these are accounted for by divorce and the death of one matrimonial partner or the other, leaving an actual sterility rate of 13 per cent. When it is taken into consideration that 78,207 out of every 100,000 white women eventually marry, in this country of some

100,000,000 population, the proportion of childless families is considered not sufficient to cause grave concern to alarmists worried over the future of the race.—Science Service.

The Forty-First Annual Meeting of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons will be held at Toronto, Ontario, September 10th, 11th and 12th, following the Canadian National Exposition. The program as already announced is as follows: "The Teaching of Operative Obstetrics," Dr. A. M. Mendenhall, Indianapolis; "The Causation, Prevention and Treatment of Post-Operative Distention of the Abdomen," Dr. Edgar A. Vander Veer, Albany; "Do the Results of Surgery Justify Its Employment in Thrombophlebitis?" Dr. John Osborn Polak, Brooklyn; "Some Factors Governing Blood Loss in the Third Stage of Labor," Dr. L. A. Calkins, Charlottesville; "Insufflation of the Tubes as a Test for Sterility," Dr. I. C. Rubin, New York City; "The Relation of Cell Volume and Plasma Fibrinogen to the Blood Sedimentation Rate," Dr. E. D. Plass, Iowa City; "Hyperthyroidism Complicating Pregnancy," Dr. F. H. Falls, Chicago; "Reactions of the Peritoneum," Dr. J. W. Kennedy, Philadelphia; "The Vaginal Approach for Certain Intraperitoneal Operations," Dr. W. Wayne Babcock, Philadelphia; "Chorea Associated with Pregnancy," Dr. Foster S. Kellogg, Boston; "Pyametra Following Irritation for Cervical Carcinoma," Dr. P. Brooke Bland, Philadelphia; "X-Ray and Radium in Pregnancy," Dr. Percy W. Toombs, Memphis; "Fibroids of the Uterus," Dr. F. A. Cleland, Toronto; "Cancer of the Cervix," Dr. William Healy, New York; "Hemorrhages of the Pubescent Period and Climacterium," Dr. Robert D. Mussey, Rochester, Minn; "The Relation of Metabolism to Gestation," Dr. Jennings C. Litzenberg, Minneapolis; "Disturbances in Carbohydrate Metabolism as a Partial Answer to the Whitridge Williams Questionnaire on Eclampsia," Dr. Paul Titus, Pittsburgh; "Problems Associated With the Cervix," Dr. R. R. Huggins, Pittsburgh; "The Liver and the Operation," Dr. G. K. Dickinson, Jersey City; "Importance of Complete Urological Investigations in all Obscure Cases," Dr. Charles W. Moots, Toledo; "Infection in the Puerperium with Analysis of 5,000 Cases," Dr. Fred L. Adair, Minneapolis; "Complete Lacerations of the Perineum," Dr. L. E. Phaneuf, Boston.

INGHAM POST-GRADUATE CONFERENCE

The Post-Graduate Conference of the Ingham County Medical Society was held Thursday, April 26, at the Hotel Olds, Lansing, Michigan. Dr. Karl Brucker, President of the Society, called the meeting to order at 10:30 a. m. The initial speaker was Dr. James T. Case, Professor of Roentgenology, Northwestern University Medical School. At 1:00 p. m. Dr. Miles F. Porter, Sr., Professor of Surgery, Indiana University School of Medicine, initiated the afternoon program. An informal dinner was given at 6:30 p. m. Short addresses were made by Dr. H. E. Randall, President of the Michigan State Medical Society; Dr. Guy Kiefer, State Health Commissioner, and Dr. Karl Brucker, President of the Ingham County Medical Society.

The evening meeting, open to the laity, was well attended by both physicians and laymen. At this time Dr. Walter C. Alvarez, of the Mayo Clinic, gave an excellent talk on "Cancer of the Digestive Tract."

The Program follows:

10:30 a. m.—"Upper Small Bowel Obstruction from the Diagnostic and Surgical Standpoint," Dr. James T. Case, Professor of Roentgenology, Northwestern University. Surgeon Battle Creek Sanitarium, Battle Creek, Michigan.

11:30 a. m.—"Carcinoma of the Stomach," Dr. Frederick A. Collier, Professor of Surgery, University of Michigan, Ann Arbor, Michigan.

1 p. m.—"Acute Abdominal Diseases," Dr. Miles F. Porter, Professor of Surgery, Indiana University School of Medicine, Fort Wayne, Indiana.

2 p. m.—"The Significance of a Good History in Gastro-Intestinal Disease," Dr. Walter C. Alvarez of Mayo Clinic.

3 p. m.—"Subacute Bacterial Endocarditis," Dr. John Phillips, Professor of Medicine, Western Reserve Medical School, Cleveland, Ohio.

4 p. m.—"Twenty-five Years Experience with Malignant Diseases About the Head and Neck," Dr. Joseph C. Beck, Professor of Oto-Laryngology, University of Illinois, College of Medicine, Chicago, Illinois.

5 p. m.—"The Importance and Use of Psychotherapy in General Practice," Dr. H. A. Reye, Professor of Neurology and Psychiatry, Detroit College of Medicine and Surgery, Detroit, Michigan.

8 p. m.—"What Every One Should Know about Cancer of the Digestive Tract." Lantern Slides. Dr. Walter C. Alvarez of Mayo Clinic.

The address given by Dr. Alvarez will appear in a near number of the Journal M. S. M. S.

OUT FISHIN'

A feller isn't thinkin' mean
Out fishin';
His thoughts are mostly good and clean
Out fishin'.
He does not knock his fellow-men,
Or harbor any grudges then;
A feller's at his finest when
Out fishin'.
A feller's glad to be a friend,
Out fishin'.
A helpin' hand he'll always lend
Out fishin'.
The brotherhood of rod and line
An' sky and stream is always fine;
Men come real close to God's design
Out fishin'.
A feller isn't plotting schemes,
Out fishin'.
He's only busy with his dreams
Out fishin'.
His livery is a coat of tan,
His creed—to do the best he can,
A feller's always mostly man,
Out fishin'.

—The Doctor.

DEATHS

Dr. W. A. Von Zellen of L'Anse died April 11th. Dr. Von Zellen was a native of Baraga County and was born in Skanee. After his graduation from the University of Michigan he started his practice in L'Anse and has since resided there. He has been a member of the Michigan State Medical Society since 1912. He is survived by his widow and one son.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EDITOR: Frederick C. Warnshuis, M. D.

Secretary Michigan State Medical Society

MINUTES OF THE EXECUTIVE COMMITTEE MEETING, HELD IN GRAND RAPIDS, MAY 21, 1928

Present: Chairman, R. C. Stone; J. D. Bruce, George L. LeFevre, Burton R. Corbus, and F. C. Warnshuis, Secretary.

1. The Secretary presented an editorial that appeared in a recent issue of the Illinois Medical Journal, together with his reply. The reply was carefully considered and the Secretary was instructed to sign and mail this to the editor of the Illinois Medical Journal, and also cause it to be incorporated in our State Journal.

2. The Secretary commented upon the financial condition of the Society, together with detailed report as to the investment fund and presented a letter of an accepted banking authority that voiced an opinion that approved the soundness of securities in which the funds were invested. This was approved by the Executive Committee.

3. The Secretary presented the necessity of increasing the facilities of the addressograph machine owned by the Society. On motion made and supported, the Secretary was authorized to spend the necessary funds to secure such increased facilities.

4. The Secretary reported on the four-day Post-Graduate Conference that was conducted in Detroit, and was also authorized to issue vouchers for the expenses incurred in conducting that Conference.

5. Dr. Bruce reported upon further plans and developments of Post-Graduate work in the state that was being supervised by the State Society and announced that within sixty days a definite program would be outlined and mailed to each individual member of the Society.

6. The Secretary was authorized to write to three individuals suggested and invite one to address the public meeting that is to be conducted in connection with the Annual Meeting of the Society that is to be held in Detroit in September.

7. The Secretary reported upon the available auditoriums in Detroit and was authorized to reserve Orchestra hall for

the public meeting that is to be held in connection with our Annual Meeting.

8. The Secretary reported upon plans prepared for providing a Scientific and Commercial exhibit in connection with the State Meeting. These plans were approved.

9. It was deemed desirable to have a special meeting of the Council some time during the month of July and upon motion duly made the Chairman of the Council and the Secretary were instructed to make the necessary arrangements for issuing call for such special meeting.

There being no further business, the meeting adjourned at 9:30 p. m.

F. C. Warnshuis, Secretary.

Honorary Membership—Please refer to the minutes of the Secretaries Conference wherein you will find the procedure to be observed in the election of honorary members.

Tri-County Meeting—Bay County was the host to the scheduled meeting of the Tri-County Meeting held in Bay City on May 20th. Dr. E. Starr Judd addressed the 150 doctors in attendance on the subject: "Some Aspects of Gall-Bladder Disease." He was introduced by President H. E. Randall.

A. M. A. Meeting—The annual session of the American Medical Association will be held in Minneapolis the week of June 11th. We urge attendance. The Twin Cities offer many inducements that will result in profit and pleasure to every attendant of the Annual Meeting. Reduced fares, certificate plan, and three railroads enables one to attend at a minimum expense of money and time.

Periodic Physical Examination—The Kent County Medical Society merits every commendation for sponsoring a week of Periodic Physical Examination in Grand Rapids. Excellent preliminary publicity for ten days was secured by a series of educational articles appearing in the daily papers, setting forth the value of a physi-

cal examination. The week was opened with a general public meeting and on Wednesday Dr. Miller of Chicago addressed the members of the Society on methods utilized in conducting an examination. The public was urged to obtain their examination from their family or private physician. For individuals unable to pay for their examination arrangements were made whereby the Out-Patient Departments of the three hospitals made this service available. Next month we purpose publishing the statistical results.

Jackson County Bulletin — Jackson County Medical Society is publishing a very creditable four-page Bulletin. The Bulletin contains the program for each meeting, minutes, news notes and comments. It evidences a very commendable Society activity and reflects great credit upon its editor, Dr. Philip Riley, the Society's Secretary.

Post-Graduate Conference, Manistee—The program printed last month was carried out at the 9th District Post-Graduate Conference held in Manistee on April 6th, with the following doctors in attendance:

J. C. Branch, White Cloud; J. J. Brownson, Kingsley; J. D. Buskirk, Shelby; A. M. Campbell and B. R. Corbus, Grand Rapids; Clinton Day, Hart; J. F. Doudna, Lake City; E. L. Eggleston, Battle Creek; Earl Fairbanks and S. Fairbanks, Luther; W. H. Force, Ludington; J. W. Gauntlett, Traverse City; C. L. Grant, Manistee; J. F. Gruber, Cadillac; J. W. Hansen, Manistee; A. R. Hayton, Shelby; Ivan L. Hunt, Scottville; George F. Inch and H. B. Kyselka, Traverse City; Lee A. Lewis, Manistee; G. H. Lynch, Big Rapids; D. A. Jamie-son, Arcadia; H. MacMullen and A. A. McKay, Manistee; E. A. McManus, Mesick; G. D. Miller, Cadillac; E. B. Minor, Traverse City; S. C. Moore, Cadillac; L. P. Munger and J. H. Nicholson, Hart; Ellery A. Oakes, Homer A. Ramsdell and L. S. Ramsdell, Manistee; O. L. Ricker, Cadillac; Edwin Rinear, Traverse City; H. D. Robinson, Manistee; E. F. Sladek, Traverse City; S. Smiseth, Suttons Bay; C. F. Smith, Traverse City; W. Joe Smith, Cadillac; C. M. Spencer, Scottville; F. G. Swartz, Traverse City; W. H. Taylor, Ludington; O. G. Wood, Hart.

Signing Petitions—In the past doctors have attached their signatures to petitions without full knowledge as to just what

they were signing or petitioning. In so doing much embarrassment has resulted to the signer as well as to the profession. Many of these petitions are not as innocent as they appear to be. However, given a petition, a comely woman to circulate it, an un-thinking person, a blarney talk—and another name is appended to the "innocent petition."

About a year ago a certain party secured quite a few letters endorsing a movement against a certain cult. Our doctors fell, gave letters and also incidentally subscribed for a magazine. Many of you now wish you had your letters back and by the time the legislature convenes you will wish so still more. You fell quite easily.

Just now a petition or rather petitions, are being circulated quite freely, petitioning the next legislature to enact certain legislation apparently to the interest of every doctor—but is it? No, you are being used as dupes for a personal attack, a personal affair and supporting a private venture. *Don't sign that petition.*

Please remember you have a Legislative Commission that is strenuously and diligently at work in your interests. It has definite plans and procedures in view that will fully conserve your interests. It is alert to existing conditions as well as ulterior movements. It seeks to keep you free from embarrassing entanglements. Do not ignore its recommendations. Do not pursue independent courses uninformed. Don't sign petitions or give letters unless you are informed as to all the motives and facts. In due course your Legislative Commission will come to you for signatures, support and work. Do not permit yourself being placed in a compromising position. Be careful as to what you sign—ask the solicitor if he has the endorsement of your State Medical Society. Without that endorsement we urge you withhold your endorsement.

ILLINOIS SITS IN JUDGMENT

Esteeming the profession of our sister state, Illinois, its State Society and its official publication, we were quite disappointed over two editorials appearing in the May issue of the "Illinois Medical Journal." We were somewhat astounded, too, that the esteemed editor should fail to ascertain facts from dependable sources ere condoning the publication of statements and formulating opinions and conclusions that are not only unsubstantiated, but also unmerited. We impart herewith the editorials and the reply. Ere again assuming

to "sit in judgment" we urge the withholding of conclusions and castignations until all the facts are considered.

MICHIGAN DOCTORS ARE DISSATISFIED BY PRACTICE OF MEDICINE IN THEIR STATE BY THE UNIVERSITY OF MICHIGAN UNDER THE PAY CLINIC SYSTEM

Socialized medicine as exemplified by the workings of paid clinic practice through the State University system as it is followed in the state of Michigan, should be warning enough not to attempt any analogous duplication of such procedure in the state of Illinois as is the tendency through the present plans for paid clinics at the University of Chicago.

Doctors in Michigan are greatly dissatisfied at this octopus that has been thrust upon them by theorists. Attention has been brought to the Michigan situation and its tangency upon the present Illinois crisis through statements made by Dr. Franklin McLean, dean of the medical department of the University of Chicago. During a conference on Sunday, March 17, 1928, at the University of Chicago, participated in by a delegation of trustees of that institution and a committee from the Chicago Medical Society, Dr. McLean, in citing the virtues of the paid clinic idea and its forthcoming advantages for ideas in Michigan and its application through the paid clinic as a shining example of what would accrue to Illinois and to the medical profession in the way of practical and scientific benefit if the same system prevailed here. In his eulogy of the harmonious workings of the idea in Michigan and elsewhere, Dr. McLean said that the doctors in the state of Michigan approved the paid clinic, state university idea. As a matter of fact, the rank and file (exclusive of the payroll brigade) of the profession in Michigan is not only dissatisfied with the workings of the system, but in reality is bitterly against it.

Dr. McLean's statements before this meeting were so at variance insofar as Michigan is concerned at least, with the writer's experience in that state, dating back to the time when an attempt was made to inflict compulsory health insurance on the medical profession of the United States that it is impossible not to refute these assertions by a few citations of record. In 1920 a cry for help came to the doctors in Illinois from the doctors in Michigan. Assistance was asked from those who knew of the bogus character of "state medicine" under the guise of compulsory health insurance in an educational campaign that would show that the new

idea was a wolf in sheep's clothing and worse. To this end such men of sane perspective and actual cognizance of the workings of compulsory health insurance as Doctors Edward H. Ochsner and George Applebach of Chicago, and W. D. Chapman of Silvis appeared on the program at the meeting of the Michigan State Medical Society, April, 1920, in response to this demand and explained some of the inevitable dangers of compulsory health insurance and state medicine in any form. These three men are all close students of this devastating problem.

The rank and file in Michigan at that time were absolutely opposed to any system of state medicine. Feeling that this attitude had not been changed, an immediate investigation was made of Dr. McLean's assertions and our idea sustained, as can be seen from these citations.

Among other comments received were these from Dr. V. L. Van Duzen and James G. Sipe (attorney at law) of Detroit, Michigan, respectively secretary and executive secretary of the East Side Medical Society, and Dr. E. C. Baumgarten of Detroit.

In part Mr. Sipe says, speaking from the legal standpoint:

"The East Side Medical Society in its investigations, made the following findings:

"First: That there is a definite trend towards State Medicine, which manifests itself through over-zealous health and charity workers, and misinformed and neglected legislation.

"Second: That the private practicing physician and surgeon is in direct competition with public, salaried doctors, nurses, public health workers and state hospitals.

"Third: That the profession has been misguided by an antiquated code of ethics.

"Fourth: That the solution is organization and inter-harmony to protect the public against charlatanism, and the medical profession against imposition.

"The following statement will summarize and in a way enlarge upon the statements heretofore made. The Society, acting through committee, found the State, County and City Boards of Health treating all types and conditions without regard to financial responsibility.

"Over-zealous board of health and school nurses soliciting cases for treatment.

"Use of State Hospitals for care of others than the indigent, and cutting fees, making competition prohibitive.

"Lack of co-operation between the boards of health and the physician.

"Trend of legislation against the private practicing physician.

"The 1927 legislature passed sufficient laws to make State Medicine possible in the state of Michigan: a few of them are, briefly:

"1. Act 207 of the Public Acts of 1927. An act to organize the State Psychiatric hospital at the University of Michigan—control of the hospital in a board of trustees—to make rules fixing charges to be made against private patients or may make special contracts for the care of same—board may also organize dispensaries and mental hygiene departments for the examination, treatment and maintenance of patients, in any city or community of this state; and may make such provision as may be deemed necessary and expedient for the prevention of mental diseases and the preservation of mental health, etc. Patients divided into two classes for admittance—those able to pay and those unable to pay.

"2. Act 236 of the Public Acts of 1927. An act to declare the policy of the State of Michigan with reference to crippled children; and to provide for their registration, examination, diagnosis, treatment, convalescent care and education. Briefly, the acts contain the following:

"(a) A crippled child includes persons from birth to the age of 21 years.

"(b) Defined as one whose activity is or may become restricted by loss, defect or deformity of bones or muscles as to his normal capacity for education and self support.

"(c) The sum of five cents to be paid to school census enumeration for each crippled child reported.

"(d) Commission to arrange for a County Clinic in each county for examination and diagnosis. There shall be at least one clinic in each county annually.

"(e) Examination and diagnosis by an orthopedic surgeon selected by the commission. Manner of treatment to be recommended by said orthopedic surgeon.

"(f) People to be charged who can afford to pay and surgeon to receive a reasonable fee.

"(g) Out Patient Department—Follow up supervision on all cases diagnosed at County Clinics.

"(h) University of Michigan hospital at Ann Arbor designated for the purpose

of carrying out the provision of this act.

"3. Act 306 of the Public Acts of 1927. An act to provide for County Health Departments. The board of supervisors of any county may provide for a county health department. The jurisdiction to be county-wide except in cities having a full time health officer; except that such cities may elect to join with the county in the organization.

"4. Act 309 of the Public Acts of 1927. An act to provide for the physical examination of drivers of motor vehicles. This act requires drivers of public vehicles carrying passengers to have a physical examination and allows the doctor to charge the handsome fee of three dollars or less.

"You have perhaps already noted, from the facts so far, that State Medicine is a reality in Michigan. Nothing else remains to be done in the way of legislative enactment. It is just a matter of time.

"In the city of Detroit, the Community Fund, by public subscription, collected \$3,000,000 to be disbursed for charitable purposes. The Board of Health requested \$4,600,000 for its maintenance for the year 1928, and the welfare commission requested \$4,500,000 for the year 1928, making a grand total of \$12,000,000, of which a small portion would care for the really indigent patient and cover the cost of the Board of Health, if it would limit its activities to preventive medicine and contagious diseases. These figures are exclusive of private charities such as the old newsboys fund and numerous privately maintained clinics. There are 1,400 doctors in the city of Detroit, whose average income would be about \$8,000, whose total gross earnings would be \$10,400,000. Obviously, this gross figure is considerably less when the expenses and numerous demands incident to the practice of medicine are deducted.

"We find our state hospital in Ann Arbor operating at cut-rate, at prices which prohibit competition and on persons who are well able to pay a fair charge. It is our purpose to limit all of the mentioned organizations to the care of indigent cases only."

Which is corroborated by Dr. Baumgarten in part as follows:

"I was very much interested in your inquiry in regard to our State University and the activities of various agencies in relieving the physician of his practice. We in Detroit are of the opinion that things are progressing to the point where some con-

certed action on the part of medical men must be taken.

"The East Side Physicians' Association of Detroit, representing about five hundred physicians, of which I am president, has taken a very active interest in this matter during the past year and has succeeded in stirring up considerable sentiment among the profession in this neighborhood.

"There were passed last year in the last legislature eight laws pertaining to medical practice, four of which we believe are especially vicious. I would like to mention each one of these and call your attention to things which might escape casual observation.

"First, the statute governing the examination of licensed drivers. The object of this, of course, is excellent, but it was sponsored by a man who has some grievance against the medical profession and to retaliate the limit of the fee for a complete physical examination was set at three dollars, thus limiting by law the fee which may be charged. We believe this to be a bad precedent, and as so often happens, the object of the law was at once defeated because many of the irregulars at once advertised that they would be glad to do the examination for one dollar and obviously such an examination means nothing.

"Second, the statute making possible the establishing of county health units by the state board of health. On the surface this seems to be a very laudable action, because it does not provide any facilities for clinical work, but in searching for the 'nigger in the woodpile,' we found that way back in 1913 a law was passed which provided for county hospital units financed by each county and under the supervision of that state department of health. So you see, the teeth were the first part of the development of this child and the body came much later. A good bit of the energy was taken out of this bill, however, by the action of the Wayne County Medical Society, which voted almost unanimously against the adoption of the measure and sent a copy of the resolution to every county society in the state with the result that all but a very few have voted the thing down. This was possible because the commissioner made the statement that he would not establish a unit anywhere where the medical profession was opposed to it.

"Before taking up the other two statutes which deal with the University of Michigan, let me say that it is the general opin-

ion of the medical profession here that this institution is the most difficult and at the same time the most urgent problem we have to deal with. The activities of the cults and paths, etc., is a mere trifle compared with this, because it is the type of competition it is most difficult for the profession to meet. Their means of publicity are not limited by same shackles of ethics the rest of us must submit to and their personnel is most capable. An investigation was taken up by our State Society last year and a preliminary report was published in the July number of the Journal. A final report will be given at our next meeting here in September. My personal view, and I believe I am expressing the opinion of the profession at large, is that I am opposed to anything at Ann Arbor over and above the requirements of a teaching institution and the care of the indigent poor of the state.

"Next the statute pertaining to 'Mental Hygiene.' This makes it possible for the establishing of "mental hygiene" stations anywhere in the state, supervised solely by the authorities at the university. Fine. But did you ever stop to think of the possibilities of the term mental hygiene? The law includes anyone who may at any time be subject to conditions which may affect the mental efficiency. Anyone who has syphilis in any form is certainly a prospective 'customer.' A child, backward in school because of physical defects, etc., can be treated in these clinics and what not without limit.

"Lastly, the orthopedic bill. This, I believe, is the most vicious of all because it carries with it an immediately available appropriation of \$50,000. This bill makes it mandatory to do a lot of things. First, the school authorities must report every crippled child, for which they receive compensation. And it goes without saying that every cripple or near cripple will be reported. It is mandatory for the commission to hold a clinic in every county in the state once a year. The commission has power to say who is going to treat these cases, and since the mayor of Ypsilanti was appointed commissioner and the meeting for the organization was recently held in Ann Arbor, I leave it to you to judge who is going to treat them.

"Of course, they say the bill provides that patients in this group may be sent to any hospital having an orthopedic surgeon and facilities to handle them, but that is one of the things that never happens.

"We are having considerable trouble

with our free clinics here also, but those are purely local matters and I will not bore you with them, but I will say that I have watched with some interest your own activities and have marvelled for a long time that it all seems to pass unnoticed.

"I have written you thus fully because it is a subject in which I am intensely interested and never lose the opportunity to arouse a similar feeling in others."

And further elucidated by Dr. V. L. Van Duzen, secretary, who says over his own signature in commenting upon the society's meeting at the Battle Creek Sanitarium, January 5, 1928:

"Because of your absence you missed a committee report which stirred up more enthusiasm than we have ever seen before at any of our meetings. When about one hundred doctors were each trying to give fifty dollars to the secretary at one time, you will believe us when we say that there was a great display of enthusiasm. Now this committee report dealt a death blow to a grievance of long standing which we have been individually protesting for years, namely—State Medicine. The report showed that state medicine is not a thing of the future, but is here in actual practice."

"In 1927 the state legislature of Michigan passed eight new laws affecting state medicine and making state medicine a reality. We knew nothing about these laws until our newly appointed legal department brought them to our attention."

The last statement is pregnant with the significance of the danger of medical indifference to state legislation.

The medical profession of Michigan has our sincere sympathy and are deserving of our moral support. Our best information is that organized medicine in Michigan is absolutely in the hands of state paid officials, both university and health boards. In spite of the gallant fight made by some of the leaders of the profession in Michigan in 1920 against the invasion of the compulsory health insurance octopus and their alertness to the dangers of the oncoming menace, the state medicine advocates have somehow continued to keep boring in until today Michigan is getting it all to the ninth degree and all in the name of an alleged suffering public which is to be made sick even if it isn't.

IT HAPPENED IN MICHIGAN BUT IT COULD NOT OCCUR IN ILLINOIS

Advocation of analogous anti-medical legislation in Illinois, in any degree—whether of one bill or of forty bills—would be noticed immediately upon such introduction by scores of medical men, mounting into the hundreds in fact, and measures would be taken immediately to combat this general menace.

Illinois State Medical Society has a wide-awake legislative committee, aided and abetted in its general alertness against these evils by practically every member of the society. Again, it is the personal touch that counts.

To the bystander at large it would appear as if the State of Michigan were well on its way, far and above any of the other states, to a program of socialized and state medicine. This is due, of course, to the control of the machinery of the State Medical Society in Michigan by the State Department of Health, and the interference by the State University hospital with the prerogatives of the medical profession through the hospital's competitive practice of medicine. This is possible by placing upon the individual taxpayers the burden of partially paying for the necessary overhead met with in caring for the sick and infirm.

If this is logic and good economics the scheme should be carried further and result in the taxpayer paying partially for clothes, food, rent and other requisites of patients able to pay.

Organized medicine in Illinois functions to prevent just such professional handicaps and legal activities as are indicated in this excerpt from an article in The Bulletin of the Wayne County (Michigan) Medical Society. Protection against just such injustice is one of the results of the diligence exerted by the Illinois State Medical Society in behalf of the membership.

"The need for better representation of the medical profession wherever lawmaking bodies convene becomes quite obvious when it is noted that during the year just passed, at least eight new laws, each of such a nature as to curtail the activities of the regular medical practitioner, have been enacted by the legislature without the knowledge on the part of the profession, of what they were all about.

"This situation gives but a faint idea of the effort being exerted toward legislating the profession in one way or another, and it seemed high time that medical men take an active hand in the proceedings, lest they be legislated entirely out of the picture."

May 22, 1928.

Dr. C. J. Whalen, Editor,
Illinois Medical Journal,
25 E. Washington St.,
Chicago, Illinois.

Dear Dr. Whalen:—

I am quite sure you will accord opportunity and space to correct the statements, apparently reached through mis-information, relative to the Michigan State Medical Society, State Medicine, Legislation and the University Hospital as published in your Editorial Columns of the May issue. If this condition did exist, as your editorial states, then "To the bystander at large" the conclusion might be justified that we "were well on our way to a program of socialized and State Medicine." Happily your information is *mis-information* as is also your statement that "this is due to the control of the machinery of the State Medical Society in Michigan by the State Department of Health, and the interference by the University Hospital, etc."

To confirm that these are erroneous and mis-represented facts permit me to submit the following official statement:

1. Our State Commissioner of Health, though president of our State Society some ten years ago, holds no office in our Society other than being Chairman of our Legislative Commission. This Commission is studying the medical laws of this country for the purpose of drafting a new Medical Practice Act for presentation to our next Legislation. It is purposed that the proposed act will include provisions that will better safeguard the welfare of the people and our profession. Other than this no office in our Society is filled by a member of the State Health Department.

(B) Our State Commissioner of Health from the day he assumed office has not instituted any health measures or promulgated any rules or regulations without first submitting them to the Council of our State Society for approval.

(C) No Clinics are conducted by the Department of Health that are not sponsored and participated in by the local County Medical Society.

(D) The Commissioner has appeared before many of our County Societies and stated that his department is not and will not be concerned with the practice of medicine and in all preventative health measures he is keenly eager that the private individual physician shall administer the immunization serums and requests the

doctors to so protect their patients. He re-iterates that he will co-operate with the doctors as far as they permit co-operation.

Our Commissioner of Health is not dominating the profession of Michigan or the State Society. Before appointing him, our Governor consulted with officers of the Society and the Society's endorsement was filed with the Governor. For the first time in many years we feel that we have a Commissioner of Health possessed of outstanding qualifications. Qualifications that are reflected in a well earned reputation and ability as a health officer—a reputation extending throughout the country and to which we point with much pride. He is co-operating with the profession as has never been done before and has firmly convinced us that he is intensely sincere in his conducting of the Department to not ignore the inherent rights of physicians. We are convinced that State Commissioner of Health, Dr. Guy L. Kiefer, is not a proponent of State Medicine.

Legislation—Your editorial cites some eight bills related in degree to medical practice in Michigan and implies that they were enacted with design to establish state medicine. Again I advise—We have a Committee on Legislation composed of members not affiliated with any health office or state department. During our last legislature this Committee was on active duty in Lansing. In addition our President, Secretary and Executive Committee of the Council made frequent trips to Lansing, held numerous interviews with members of the Legislature, the Governor, presiding officers and Committee Chairmen. Further we had an attorney, paid for his time and services, who remained in contact during the entire session of the legislature. In addition, our then President, Dr. J. B. Jackson and our State Secretary formed a Central Committee composed of two representatives of the following state agencies concerned with health measures: State Dental Society, State Tuberculosis Society, State Nurses Association, State Charities Association, and the Red Cross for the purpose of recording the combined influence of the members of these organizations for or against proposed legislation. No bill was introduced, but what a copy was secured, the bill referred to our attorney and a close study of its provisions was made. In several instances bills were caused to remain buried in committees. A Chiropractic and Osteopathic bill was defeated.

Legislative measures were reported from time to time in the Journal. Thus did the Legislative Committee, Executive Committee, Attorney and officers scrutinize the activities of our last legislature. We knew of the enactment of the so-called eight bills referred to. When one reads these bills in their entirety and notes the provisions in detail we do not believe they can be construed as State Medicine measures.

We therefore disclaim that legislation tending toward State Medicine was condoned by the State Medical Society. We further disclaim that the State Society abets the institution of State Medicine.

State University—We admit that up to the last few years affairs and conditions at the University Hospital did not meet with the profession's entire approval. We have known that for several years and during those several years the representatives of the State Society have been intently active to bring about a more satisfactory relationship and cause an abatement of certain practices. It was not an easy task or problem, many factors and influences were involved. Progress is being made and, as announced last February, closer liason has been established by the appointment of an Advisory Council, recognized by the Regents. This advisory Council is composed of the President, Secretary, Editor, Chairman of our Committee on Education, and Chairman of the Councilours. Committee on County Societies as representative of our State Medical Society. This advisory Council will still more intimately concern itself with the University Hospital affairs. It is our eventual hope that satisfactory results will attend the Council's labors.

Our State University is our University in which we as citizen's and taxpayers have just pride. At times we may have been negligent in failing to exhibit interest but that day is past. It must be remembered that it is a great institution in which many and diversified state interests are centered and that its management is fraught with many complexing problems involving many factors. Its policies cannot be created, amended or abrogated at the moment. The interests of all must necessarily receive consideration. Our State Society is alert in representing the profession's interests.

The University does not dominate the

State Society—it did ignore the State Society in years past but the evidence is quite convincing that now the State Society will receive consideration and the Society's expressions will receive just recognition.

We, in Michigan, are jealous of our reputations and resent mis-leading, unsubstantiated statements. We feel we are in alert, intimate contact with all state affairs that bear upon medical practice, public health activities and state medicine. We too recognize that in our midst there are clinics sponsored by social reformers under lay direction, but not any more so then in Illinois, and we are engaged in an attempt at their control. We prize your solicitousness but just now it is our urge that you do not impugn conditions in Michigan until you actually possess facts. The officers of the Michigan State Medical Society will always be glad to supply facts of a nature that is absolutely authentic and not deduced from aberrant machinating minds.

The problems of social medicine—the policies of clinics, lay dominancy of so-called welfare movements, the conduct of University and teaching hospitals, the demarcation between public health and preventative health measures and state medicine so-called are stupendous problems, tremendously exacting in their multiple impingements upon every phase of human life and activity. Solution and adjustment is not born of the moment nor in a single group. The demand is, that all sincerely and determinedly, seek the ultimate answer—you in your field and sphere and we in ours in order that from the combined attrition of earnest minds and the interchange of reason, judgment and discernment definite applicable policies be instituted. In doing so it ill becomes us to broadcast aspersions upon state groups—especially so when the assailed group is honestly in quest of light and guidance as is too the profession of Illinois. We in Michigan assure you of our friendly esteem and good will and sincerely desire to merit in like manner the esteem of the profession of Illinois and its valued publication—The Illinois Medical Journal.

By Direction of the Council,

F. C. WARNSHUIS,

Secretary.

County Society Secretaries' Annual Conference, Michigan State Medical Society—May 14, 1928

BOOK-CADILLAC HOTEL, DETROIT, MICHIGAN

As planned, the Annual Conference of County Secretaries was held in Detroit on the afternoon and evening of May 14, 1928. We append the stenographer's transcript of the papers and discussions. Especial attention is directed to the paper presented by Dr. Ross of New York on Medical Legislation. The reading of these articles and discussions will impart to the reader a closer insight of the work of your Society.

STENOGRAPHER'S TRANSCRIPT OF MINUTES

MONDAY AFTERNOON SESSION

May 14, 1928

The Annual Conference of County Medical Society Secretaries of the Michigan State Medical Society, held in the Book-Cadillac Hotel, Detroit, Michigan, was called to order at two-fifteen o'clock by the President of the Society, Dr. H. E. Randall.

President Randall: There are two criticisms of medical organizations: One is that they never start on time; the other is that the Chairman talks too long. There is a story told of someone who was to introduce Bryan, and who, in doing it, made a very long speech. It was the opportunity of his lifetime, so he left Bryan only about fifteen minutes to make his speech and catch his train. A farmer afterward was asked how he liked the meeting.

"Pretty good speech that fellow made, but the bald-headed guy wasn't any slouch."

I do not intend to make the speech of the afternoon.

I believe the primary object of medical education is to make better doctors, and the county society is really a post graduate institution. I have said that a state society has four functions to perform:

(1) To educate the doctors; to educate each other by exchanging experience, by reading papers; (2) Education of the public. These two are related, because the more you educate the public the more they have confidence in the doctor. At the same time it stimulates the doctor to live up to the confidence the patient has. (3) To protect the welfare of its members. Of course that is done in your legislative work

and also through your medico-legal committees. (4) To keep doctors together, to keep them friendly to each other.

That medical organization has been a success in America is evidenced by the fact that a few years ago the average income of doctors in the United States was \$700 a year. The last figures we had showed that the average doctor's income is something like \$3,000 a year. At the same time, the doctor has received more, but the public has also received more.

No man, no matter how much he can possibly contribute to medical organization or to medical knowledge, can repay the debt that he owes to medical societies and to the men who have given him this knowledge. I want you to think of this meeting as a gathering of those of us who are here to exchange suggestions.

I am going to turn the meeting over to Dr. Warnshuis who will talk to us about "Organizational Activities."

F. C. Warnshuis: Mr. President and Fellow-Secretaries: Last evening when I reached Detroit, a long distance call awaited me from Ann Arbor. Dr. Bruce informed me he would be unable to be present here today because of illness that is confining him to his bed. He thought possibly his doctor might let him come over tomorrow. He has thrown the burden of the next two topics on the program somewhat upon the Secretary. As you know, it is usually the Secretary's job to fill in when the speaker falls down.

It was some sixteen years ago that through Dr. Schenck, who was Secretary of the State Society, the County Secretaries' organization came into existence on a boat at the time of our meeting at Manistee. Possibly Dr. Hume will recall the occasion. For a number of years the County Secretaries met in conjunction with the State Society at the annual meeting. Then the time came when these meetings for some reason or other were abandoned until about four years ago these sessions were resumed in connection with the annual meeting. But the activities of the annual meeting detracted so much from the work that might be accomplished by

the County Secretaries at a conference like this, that the Council determined to set a time other than at the annual meeting, for the holding of these annual conferences. As possibly most of you know, they have been held at Grand Rapids, at Jackson, at Detroit, and one at Battle Creek.

The idea, as President Randall has somewhat intimated to you, of this conference is to ask you men who are really wheel-horses of the organization in the state to meet together, to exchange experiences, and to see wherein and how we may add to the influence, to the value, to the usefulness, of our County Medical Societies in the state, in service not only to the doctors who are our members, but also to the public at large to whom we owe a responsibility.

The subject of organized activity was placed upon the program and assigned to me by the Chairman of the County Societies Committee of the Council, who arranged this program. When we come to consider organized activity, we realize that it is a much twanged string, a string that is capable of yielding varied tones in a minor or in a major key, dependent upon the individual who is doing the twanging of the strings. In that respect I am not going to talk about the old twangs with the old songs, but rather about some of the activities and responsibilities that have been assumed by the State Society and that have been exerted now in its influence through the County Societies, and I am going to acquaint you probably a little more intimately with the twenty-four diversified activities that now arrest the attention of your state organization.

The accusation is advanced at times that we as Secretaries, both of the County Societies and also of the State Society, are doing very little. Those accusations are made by men who really do not know the activities that are placed upon the shoulders of individual officers of our state organization. If their accusations were true, then both you and I are spending a lot of our time uselessly and not accomplishing anything. You and I individually may know what is being done, but the other fellow doesn't. That is why it becomes obligatory for us not only to do our work, but to be actual ministers, missionaries, of organized medicine in educating not only the public, but our fellow members, and sometimes I think that our fellow members need more educating than does the public at large.

Your state organization at one time, as

with all organized units of the medical profession in this country, was merely an opportunity for men to get together to discuss scientific subjects; scientific papers were read, case reports and individual professional experiences were exchanged. But the day of that type of organized medical activity is past. With the progress and the trend of the events of the time, a greater responsibility has been placed upon the individual doctor and the profession as a whole in their relationship to the public.

We have two duties to assume, as Dr. Randall intimated somewhat in his rather brief opening address. Two types of duties are ours: First, those pertaining to the professional side and professional features of our work; second, those pertaining to our relationship to the public and the public's relationship to us.

Your State Society is concerned vitally, actively, earnestly, in both of these problems. I purpose in somewhat of a sketchy way just to advance or to touch upon some of the things that are being accomplished and the work that is being evidenced throughout the state. I do hope that it will lead up to just one thing. If it does, this meeting will be of untold value and success to each one of you. That one thing is that you glean all these facts, and if there are any questions of doubt, that you ask questions in order that we may explain them to you. If I cannot explain them, other members of the Council who are present may be able to give you more accurate information.

Of course you are aware of the activity of the Journal. You know that up until the present year the Journal was edited by the Secretary. Because of these many diversified activities, the time of the Secretary consumed in editing the Journal prevented full supervision that might well be given to these other activities but which were being neglected because the Journal had to be gotten out each month. In the solution of this problem, the Council wisely, I believe (and I think you will all probably agree), divorced the office of Secretary-Editor and appointed a new editor of the Journal in the person of Dr. J. H. Dempster, of Detroit, who is well known to the majority of you. Dr. Dempster is editing the scientific end of the Journal up to and through the editorial pages. The Council, however, still has placed upon the shoulders of the Secretary the burden of the management of the Journal, the printing of the Journal, the advertising business of the Journal, and also that section

of the Journal that is devoted to the County Society reports or purely organizational activities. While we have been relieved of a lot of proof-reading, we still have the duties of editorship in connection with these departments of the Journal and also its financial management.

However, it has afforded us more time that is now being devoted to the other features of our organizational work.

You also know about the medico-legal defense of our Society, which has been in existence for a good number of years. The success of that feature of our organization is so well established that none of us ever would think of abandoning it. Many of us little realize the value and the protection that it gives. It is not until a man is sued for malpractice that he commences to appreciate that value of medical defense in the manner in which he is defended in his malpractice suit.

Dr. Tibbals, who has been Chairman of the Medico-legal Committee since its organization some eighteen years ago, promised to be here a little later this afternoon, and he is going to give you a somewhat more intimate picture of the activities and demands that are made upon his Committee and the protection they are according to our members.

You also know, possibly in a superficial way, of the work of the Joint Committee on Public Health and Education. I say possibly in a superficial way, because of the inquiries that come in the mail to our office relative to subjects pertaining to the activities of that Committee; also because the work of that Committee and the benefits of that organizational work are not being received, are not being obtained in the counties through the state as widely and as fully as they might be.

This Joint Committee, let me repeat, is constituted of a representative from our State Medical Society, the University of Michigan Medical Department, the Michigan State Department of Health, the Michigan State Tuberculosis Society, the Michigan State Dental Society, the Michigan State Nurses' Association, and one or two other welfare organizations of the state.

This Committee is headed by President Little of the University of Michigan, who is its Chairman.

The object and work of this Committee is to disseminate to the lay people of our state the truths of scientific medicine. It has enrolled some 300 or 400 speakers from among our membership of the state

who are able to go and are ready to go out to any lay organization and talk upon any subject of scientific medicine. The enrollment of these speakers is compiled in a program and the assignment of places and appointments are made through the Extension Department of the University of Michigan.

This program, containing the list of 300 speakers, together with the topics upon which they talk, has been sent and is sent each year to every Parent-Teachers association in the state, to every Grange organization in the state, to every noon-day luncheon club, and to many of these little community clubs, literary societies, and welfare organizations that are in existence. They are advised that they may select one or as many as they want of these speakers for any meeting that they may sponsor, and that the speaker will come and talk to that audience upon these subjects that are enumerated in the program, without expense to them except that they are to bear the expense of providing the meeting place.

That is a wonderful opportunity to convey to the public some of the truths of scientific medicine and to combat the misleading allegations and statements and claims of those who attempt to practice medicine or who attempt to treat the ills of humanity through the various schools of cults that are in existence. It has been felt by those who have sponsored this work that if we can educate the people as to the truths, then in their own judgment and wisdom they will no longer seek the administrations of those who are ill prepared to take care of them.

During the last year in the meetings that were held under the organization of our Joint Committee on Public Health and Education, some 180,000 lay people in the state of Michigan were so addressed and so enlightened. We cannot produce in figures or in illustrations the good that is being accomplished by that work. We cannot give you any tangible or definite evidence other than that as we tell the people that which we can do for them, it must be apparent they are going to acquire or make it their business to acquire these benefits and not to be misled by the misstatements of those who represent these other cult organizations.

That is a missionary task entirely, and I think you will find that the sentiment of friendliness to the medical profession by the people at large is gradually becoming more apparent than it was five years or

even two years ago. It is a part of the organizational work that is being conducted by your State Society.

I said I was afraid that many of you did not know what was being done, because these meetings are not being held as often nor in as great numbers in the various counties of the state as might be. It is one of the things that the State Council would like to have the County Secretaries do: To cause some of their local lay organizations to secure some of these speakers and to conduct some of these public health meetings in their communities.

If you will write to the Secretary of the Extension Bureau, Dr. W. D. Henderson, at the University of Michigan, he will send you a bulletin containing the list of speakers and their subjects, and through proper committees from your County Societies you can obtain some lay organizations in your communities to sponsor the holding of these meetings. You will accomplish a lot of good in your counties in that way.

I do not recommend that the County Medical Society sponsor the meeting, because then you lay yourself liable to the public charge that you are trying to feather your own nest; be the silent worker back of the movement and obtain the support and cooperation of some lay organization that will conduct and sponsor these meetings in your county, and I am quite sure you will derive a lot of benefit from them.

In addition to that, the same Joint Committee believes in teaching the young and converting them to the truths before they are misled and misguided by these cult organizations. Starting first in a couple of our cities, and extending to most of our high schools—not all, but as rapidly as possible—this Joint Committee is conducting a series of six to eight talks at a general assembly of the high school students of the high schools of our state, talking to them on such subjects as Pasteur, his life and his influence, and conveying to them through that subject of Pasteur, the story of bacteriology; Lister, and conveying through Lister's life and what he accomplished the story of surgery; and through similar topics they are conducting in the high schools of our state a series of six to eight lectures in the year for the education of the high school students. I think you perceive the benefits and the educational features that are being obtained from that type of public health education.

That is one method that your State So-

ciety is utilizing for the education of the public.

The question arises almost every week to you, and certainly it does to me: Why are we permitting men to practice without licenses, men who are not being made to meet the same standards that you and I and every graduate of medicine are made to meet in regard to the legal qualifications or the legal enactments of our state? Why doesn't the State Society, the County Society, do something to prosecute these quacks? I don't believe it is necessary for me to comment at any length upon the question of legal procedure against infractions of our medical practice law. The many impinging difficulties and obligations that arise are possibly apparent to a good many of you. Your State Society, your County Society, cannot be the police officer for the enforcement of the medical practice act of the state. It must be done through some other avenue or channel.

It is true that your State Society has, for the last fifteen or sixteen years, been at each session of the legislature and fought the attempts made by these cultists to secure personal legislation for their own favor and to legalize their activity and cult practice. Your state organization, possibly not openly, because those of you who have ever encountered the school of politics and its methods as evidenced in our legislature know that a good many of the things you accomplish are done on the quiet in the personal interview and without any blare of trumpets or any degree of publicity, has been represented at the legislature and has prevented the enactment of any chiropractic law in Michigan creating any chiropractic board. When I say your Society, I mean the State Society and its constituent units, because many of you men have been the means of securing local registering of disapproval on the part of influential individuals in your counties with the members of the legislature, which has enabled us to defeat this legislation. So it is your State Society. But your state organization has done this: At the last session of the legislature, our Legislative Committee has been in constant contact with the legislature. The President of your State Society, your Secretary, the members of the Executive Committee of the Council, have been at Lansing during the session of the legislature, not once, but all the time. In addition to that, your State Society employed, without anyone's knowing he was there for that purpose, a well known attorney who represented our interests, who

sat in on committee hearings, and who had individual and personal conferences with members of the legislature, who interviewed the Governor, the Lieutenant Governor and the Speaker of the House, and who obtained in that way their assistance for the defeat of undesirable legislation.

The value of the time occupied in that way cannot be imparted in words or computed in money or deed, but it is only the final aggregate result that enables us to say that that is worthwhile activity on the part of your state organization in protecting the interests of the individual doctor and is part of the benefits of membership.

Some of these things that have gone on at Lansing and the methods that have been employed to combat the attempts that have been made there have not been imparted for the very reason that it was not politic to impart them, for it would enable your opponent to see what your hand held, and so would circumvent the methods that were instituted. But you can rest assured and you can tell your members that at every session of our legislature the state organization, representing the profession of Michigan, is alert and on the ground.

Some have said that some of the bills that did pass were to the detriment of the interests of the individual doctor and the profession as a whole. I cannot quite agree, because every bill that was passed there was carefully scrutinized by the attorney, by the Legislative Commission, by the Executive Committee of the Council, by individual members of the Society, and also by the Special Legislative Committee of the Wayne County Medical Society that joined the State Society in its legislative activity.

Some questions may be raised, especially on this chauffeur's examination license bill that was passed requiring every chauffeur to have a physical examination and where in the law set the fee at \$3. We will agree with you that \$3 is not a proper compensation for a physical examination of a chauffeur, but when you look at the degree and extent and scope of that examination, it is a part compensation, and it was a darned sight better as an agreement to accept the \$3 clause than to have the state appoint one or two medical examiners to make these examinations on an annual salary basis. Sometimes compromises have to be made. I believe that was one of the compromises that was made, not with the intent of appraising the value of the doctor's service in making the examination, but to

defeat the institution of state officers who were going to make the examination.

That I just inject as a sort of side explanation of why sometimes we do not get all that we want or the ideals that we have in mind are not attained if we have to compromise on some of these legislative activities.

You remember that at the last meeting of our House of Delegates, it was enacted that the President appoint what is known as a Legislative Commission, and it charged that Legislative Commission to study the laws of medical practice in this country as now being applied, and to endeavor to draw up or to form or to write a new medical practice act for the state of Michigan governing the practice of all those who hold themselves out as being able and ready to take care of the physical needs and physical ills of the people of this commonwealth. That included the doctors as well as the chiropractors, the osteopaths, and any of the other fifty-seven varieties of "paths."

This Commission was so appointed and has been at work. It has secured the laws of all the states in the Union, including those new basic science laws that have been passed and instituted in some of the states. It has carefully studied these laws. It has written for and secured information in answer to a questionnaire that was sent to the secretary of every state board of registration in the Union, and to the president and secretary of every state medical society in the Union, asking them for their personal interpretations and experiences in their respective states in regard to their medical practice acts, hoping thereby to gather facts that would enable the Commission of your State Society to draw up what we might term a model medical practice act.

I am not going to say anything more about the subject of medical legislation or the work of this Legislative Commission, because if you refer to your program you will see that it is a subject for discussion this evening, and we have been very fortunate in securing Dr. Ross, of the New York State Medical Society, who is the leader and pioneer in the legislative battles that were wrought and the achievements that were accomplished in the state of New York upon this very same subject. He and Dr. Kiefer, the Chairman of our State Commission, are going to discuss this subject with you tonight. I mention it merely to show you that it is another of the activities of your state organization that is

being advanced and conducted for the interest and welfare of the members.

In the matter of post graduate education, Dr. Bruce was going to handle this subject, but he has authorized me to make certain statements and to give you a report of some of the activities of his Committee of which he is Chairman, in regard to post graduate education. You know that some years back we started with the idea of sending to County Societies teams that conducted scientific programs. This, for several reasons, did not prove very satisfactory. Though it was realized that their services were of value, the application in that form did not serve the purpose that was being sought.

Then instead of county meetings we started the post graduate conferences in the Councillor Districts—one-day sessions. These have proven to be very successful; they have proven to be very acceptable to the men, and they have been eager and anxious to have them. They have been conducted every year for the past four years, to the number of fourteen and eighteen, and in one year twenty-two, throughout the state. They are being so conducted this year.

In addition to the post graduate conferences, arrangements were made two years ago, you will recall, for a post graduate clinic at the University Hospital for two and a half days. It was repeated last year and had a splendid response in attendance.

It was then felt that these post graduate clinics were worthy of further development, so Dr. Bruce's committee is at work and has tentatively outlined not only this clinic that is being conducted four days of this week in Detroit, but purposes also to conduct one in Flint sometime during the late summer months, one in Grand Rapids in the early fall months, and another post graduate clinic at the University Hospital undoubtedly in the early weeks of November, the idea being to give to our members opportunities for post graduate study, post graduate information, with the least personal discomfort and inconvenience possible, and with the least expenditure of personal funds; in other words, bringing as far as possible, these post graduate clinics to your very doors in order that you may benefit and profit thereby and be reflected in the service that you are rendering to the people of your community.

There are other things in store, things that cannot be wrought in a moment. While it is true that in one or two in-

stances clinics that were contemplated for districts were not held thus far this year, it has not been because of any neglect on the part of the officers of your State Society or its Clinic Committee, but it has been because our plans had to be made to conform to the big plan that is being worked out by this Committee and of which an announcement will be forthcoming within possibly the next month, certainly within the next sixty days.

I can intimate to you that it tends and leads to the establishment of an all-year post graduate school to which our members may come and pursue a course of post graduate study, spread over the year, according to the time that they can devote to it during the year. For illustration, a man may come for a couple of days and take a course in heart conditions, we will say, and take a couple of days' work this week, then two weeks later he may come back to take a couple more days, and two weeks later a couple more, so through the year he may spend a definite amount of time and pursue a definite course of study at this post graduate school. That is not only true in medicine, but it is true in the diagnostic fields of medicine, the laboratory work, and the specialties, to provide that post graduate opportunity for our members within the bounds of our state, conducted under plans that will equal any post graduate school in our country and will be of service to each individual physician, and through that post graduate school make available speakers, teams (not in the sense that we used to use them ten years ago), men who can go to county societies and be enabled to give practical demonstrations at county meetings as well as to conduct these post graduate conferences that we have been conducting one day each in the various societies.

There is a vast amount of detail to be worked out in connection with that program, and it is because of these details that seemingly some of the conferences were not held at the time they were scheduled, and were postponed, but I can give assurance to each one of you from Dr. Bruce and from the other officers of your Society, as well as the Council, that the work of post graduate education is not being neglected in Michigan this year, but that before the end of the year we will exhibit and record greater activity in providing post graduate opportunities for our members.

Much criticism has been raised also regarding some of the methods of the Uni-

versity Hospital. That is a criticism that has existed, I guess, ever since the University Medical Department has been in existence, and it may continue to exist. It has an interlinking, impinging contact with not only the doctors, but with everybody in Michigan, with the legal profession in Michigan, with the County Charity Boards, and the Health Departments. It is a problem that has grown as the years have advanced, and has attached to it many tentacles that are hard and barnacles that are difficult to tear off. It cannot be accomplished or wrought in one night, one week, or one year.

A good many of you recall the conference that was held in Ann Arbor some five or six years ago when we were afraid at one time during that conference that the President of the University was going to come to blows with the President of the Wayne County Medical Society. So your Society has been concerned with this problem. We have been making headway. Within the last year definite headway has been made because now the University, through its Board of Regents, has asked for and there has been appointed an Advisory Council to the University Hospital post graduate work. That Advisory Council is constituted of the President of your State Society, the Chairman of the Council's Committee on County Societies, the Chairman of our Committee on Medical Education, the Editor of the Journal, and the Secretary of the State Society. It is now a recognized representative committee of your State Society that is going to sit in at the deliberations, the management, and the administration of the University Hospital to safeguard the interests of the individual doctors. If that is service, I do not know, but I believe it is. We are trying to solve that problem. That is another activity of your State Society.

I have talked a lot, President Randall. I don't want to continue talking about these various things, but there are some twenty-four diversified activities of your State Society that are being advanced, that are being directed, that are being expanded in the interest of organized medicine and its individual members. It can only succeed as the support of the profession is obtained for this work. The State Society is dependent upon its constituent unit, the County Society, to do its work in enlisting and enrolling this support. In the County Society there is only one man who is really the wheel-horse, the man who directs the

life and the achievements of that County Society. It is not the President; it is the Secretary. I can speak feelingly with all of you, because for six years I was a County Secretary also, and I know the griefs and burdens that you have to bear in your individual communities. However, it is a contribution that you make to the profession, that you make to the people of your state. In rendering that service, the very fact that you have acquitted yourself of the responsibilities of the office is almost a reward and a satisfaction in itself. Sometimes when things don't work well and go somewhat haywire in your county, just forget it, dig in a little harder, for the satisfaction of beating the game is going to be ample pay and remuneration for the time you have spent. You will find it so if you have the zeal and the interest in the activities that you are conducting through your County Society.

That is all I am going to say now, President Randall. A little later, after the two other papers have been presented, we are going to have a round table discussion. That is going to be quite informal. During the two talks that are presented to you, I wish each of you would make notes of things that have been bothering you, that you may have on your minds, and ask questions. We will tell how we have met those problems in each county and what we have done, and we will see if from this conference and round table discussion we can go away with something that will enable us to make our lives as County Secretaries a little more pleasurable. (Applause).

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President Randall: Our Secretary made the statement that the contributions made by the County Secretaries are for the good of the medical profession. That reminds me of the classification made by the psychologists with respect to mental development. A child in first developing is egocentric, thinking only of itself. As it gets a little older it learns to play with the other children. As it gets still a little older it learns to work with others, and in the fourth stage it learns to think of the other fellow. That is the stage in which the County Secretary is. I was eight years a County Secretary, and I know some of the trials and tribulations. It is your contribution that you are making to one of the greatest professions in the world.

The next subject on our program is "Attendance: Are You coming to the County Meeting?" Dr. R. G. B. Marsh, of Tecumseh, will handle this subject.

ARE YOU COMING TO THE COUNTY MEETING?

R. G. B. MARSH, M. D.
TECUMSEH, MICHIGAN

The subject on which I have been asked to speak is one in which I am greatly interested. I believe that the County Medical Society is an exceedingly important unit in the advancement of Scientific Medicine. Even if the public does not know what is going on within the meetings, the members of the Society are at least given the chance to improve their knowledge and thus give better medical and surgical service to the public.

I do not know whether it is possible to get a group of medical men to answer "Yes" to the question heading this paper or not. I am still hoping to have a 100% meeting in Lenawee County some time.

I have been in practice for nearly five years and a member of my County Society since January 1924. There was only one meeting held in 1923 that I had any knowledge of and that came at the end of the year.

In January 1924 a meeting was held at the residence of the retiring President and the wives of the physicians were also invited. There was therefore a good attendance. An election of officers was held and it looked as if I had gotten in with a good group of men. I found out later that I had, but there was a general lack of interest as evidenced by poor attendance at the succeeding scientific meetings. The regular meetings were held in the Council Room of the Adrian City Hall. That room may be all right for what it is regularly used for but it was no place for a medical meeting. The meetings were held at irregular times and only 7 or 8 members came out. The place was not inviting and it was uncomfortable to say the least. It was an injustice to ask a speaker to come perhaps a long distance to give a talk in such a place at eight o'clock or later and then not even feed him. This condition continued for two more years.

In January 1926 we began a new method of conducting our meetings, by holding them in the homes of the members in different parts of the County. This method worked well that year, but toward the close it became very evident that a different method must be instituted because the attendance was increasing so much that there were very few homes of members large enough to take care of the men who were coming out. These meetings were of

course followed by refreshments and a social hour.

Since then most of our meetings are held in a hotel and start with a dinner at six-thirty.

I believe that the endeavor of every County Secretary should be to make the meetings of his Society so interesting that the members will learn to know their value and feel that they cannot afford to miss any if it is possible to attend. That gives the start on a standard to work by, but it is quite another thing to make each member see it that way. To bring about a successful year's work in even the smallest Societies it is important that we get away from the one man system. The first thing then is to have committees appointed, and the most important one of all is the program committee. These men should be from different parts of the county so that a more concrete idea of the type of subjects desired may be obtained. We decide on the subjects we want for each month and then we decide on the speakers. It is the duty of the Secretary then to get the speakers and spread them over the year. When this has been done the work is only begun. The next thing is to get the members out to hear the speakers.

Some sort of bait must be used to catch the interest of medical men as well as any other group. I have devised a few ways of enticing them to meetings that may be applicable to other County Societies, especially the smaller ones.

In the first place, give your members to understand that you are going to have a full program with meetings each month at the same time each month. Then impress them with the fact that this is a medical organization run along scientific lines. Give some of your own local members a chance to do some talking at the meetings by assigning them a suitable subject several months in advance. If you pick the right ones for this work it helps the man and it helps the Society as a whole. It is the duty of the Secretary to study the individual members and have programs that will appeal to them. In Lenawee we have only three men who limit themselves to a specialty, and we do not forget them in making out the program.

Arrange for at least four combined scientific and social meetings each year. This constitutes one lure. It is obvious that judgment must be used in choosing the place for these meetings.

One of these meetings may include the Ladies Auxiliary. The ladies are also in-

vited to the annual picnic and also to the annual banquet. The latter is always a non medical meeting. We obtain a speaker to talk on a non medical subject.

One very successful way of getting the news of a meeting spread around is for the Secretary to call a member in each town in the county and ask him to call every other man in his town. Explain carefully who the speaker is, the time and place of meeting and the subject. This applies of course to the smaller Societies like Lena-wee. It is an inexpensive method because four or five phone calls do not cost as much as 35 or 40 printed cards. The phone method also impresses at least one member in each town that there is going to be a meeting and by the time he has called three to five men on the phone and talked with them he also knows there are other doctors in his town and that promotes goodfellowship.

The written invitation is of course the most usual method of announcing the meetings but unless these are short and easily read the chances are that they will not be read at all. These may be simple post cards, return post cards, and I make a practice of sending out at intervals a more or less personal letter. After the invitations are sent out I make an effort to ask the different men when I see them at the hospital if they got the invitation and whether they will attend or not. Some of the answers I get are both amusing as well as gratifying. After the regular announcement of the meeting on the card or letter I add a few words telling what may take place after the formal meeting is finished. If it is to be a musical program, I indicate whether it will be the tinkle of glasses, the click of the red, blue and white discs, or the rattle of ivory or the clash of knives and forks. The personal letter takes a great deal of work on the part of the Secretary, but I believe it is worth it to send them out three or four times a year. These are made out as a form letter on a mimeograph and a space left at the bottom for a personal note to the individual to whom it is sent. Here I tell him that he has missed so many meetings and attended so many and what he has missed when he was not present. I outline the program for the balance of the year and end with a request for him to call on the phone some other physician and remind him of the next meeting. In this way every man receives at least one personal call from another member, as well as the letter itself.

Regularity in holding the meetings is

very important because soon the members get the habit of looking forward to hearing about the next meeting. A striking example of this happened last month in my own county. I had all plans made for one of the most important meetings of the year and then I forgot all about it. One of the members who had previously been one of the hardest men to get to a meeting asked me the day before the meeting where it was to be and wondered if I had forgotten to mail his invitation. I had all right, but the telephone method was put into operation at once and we had as good an attendance the next night as we have had in a long time.

I believe that the picnic meeting is an excellent thing. It may be held in July or August, but I believe the latter month is the best because then there is not too great a gap until the next meeting in September and that month is when the Society gets going again, and is apt to fall a little flat unless an extra stimulus is given to it. Not much bait has to be thrown out for the picnic because the ladies are always invited as well as any other guests desired, and every one is told to stay home if he feels formal that day. No shop talk is allowed and only first names are used in addressing one another.

In conclusion I believe that attendance at County Medical meetings can be increased by the following methods:

Hold the meetings every month at the same time each month.

Choose an attractive place for the meeting.

Have the meetings in different towns in the county. This evens up the distance the men have to travel. It also keeps the public informed of our existence.

Obtain the best possible speakers. The bigger the man the more quickly will he consent to come.

Have a dinner at each meeting. This is good for the speaker as well as the local men.

Have at least four combined scientific and social meetings.

Have the scientific program and the speakers published in the Journal at the beginning of the year.

Have an annual banquet with a non-medical program. Invite to this meeting some other professional group, such as the Bar Association or the Dentists of the County.

The Secretary, should, I believe, be one of the younger members and his term of office should be for at least two years.

Invite to one of your meetings each year, and see that he gets there, your district Councilor, the State Secretary, and if possible the State President. Also keep these men informed of your activities because they will help you when you need help most.

Last of all use plenty of different kinds of bait to lure the men to the meetings and then do not forget to show them a good time and send them home feeling that the effort to attend was well worth while.

President Randall: I don't want you to think I am a psychologist, but sometimes these principles that psychologists use are important for the rest of us. I don't know much about prayer meetings, but a farmer said that the best prayer meetings he ever attended he noticed were the ones he took part in. If you can get the members of your Society to do even little things, serve on a committee, or some other thing, using this principle of psychology, you can accomplish a great deal.

The next talk is "Securing Community Support," by Dr. Charles A. Neafie, of Pontiac.

"SECURING COMMUNITY SUPPORT"

CHARLES A. NEAFIE, M. D.

PONTIAC, MICHIGAN

The subject that has been assigned to me is a topic that has been much discussed among the members of the Oakland County Medical Society in recent years, and our members feel that much has been accomplished in developing support for the organized medical profession in Oakland county.

To secure community support there are two factors of the utmost importance, the first, that the members of the society take an active part in the life of the community, and the second, that the society arrange for suitable publicity, in order to furnish the general public with information regarding the activities of the society, and reliable information as to the progress of medicine.

The physicians of Oakland county have always assumed a leading position in all movements for the betterment of the community. The most common form of community service rendered by physicians, outside of their professional activities, has been as members of local school boards. Dr. R. Y. Ferguson, Pontiac, and Dr. Joseph Morrison, Royal Oak, had much to do with the establishment and development

of the modern school systems of their respective cities.

In Pontiac, in 1919, a member of our society was elected to serve on the Charter Revision Commission. This commission submitted the present city charter, which provided for a "Commission-Manager Plan" of government and which was adopted by the people of the city in July 1920. The new charter provided for a seven man commission, and at the general election held in November of that year, Dr. D. G. Castell was elected a city commissioner. Dr. Castell served a three-year term and was succeeded by Dr. L. A. Farnham, an active member of our County Society, who has since been re-elected for a second term.

In Royal Oak the physicians have been equally active. One of our members served on the Charter Revision Commission in that municipality, and later a member of the profession was elected to serve on the commission.

A considerable number of the members of the society belong to the Luncheon Service Clubs, located in the various communities of the county, and take a prominent part in the activities of these organizations, particularly those activities bearing upon the health and welfare of the people.

One of the most valuable contacts we have made has been with the Oakland County Bar Association. For a number of years past, we have been exchanging complementary meetings with this association. During the summer months a golf match is arranged between the lawyers and doctors, followed by a dinner. From time to time prominent members of the Bar Association have been invited to address the society at our regular meetings. The contact so far has developed a spirit of good will and mutual understanding, that has served to bring about a more friendly feeling between these two professions, and we feel that this contact has great possibilities for further development.

The work of our physicians in connection with the lectures given as a part of the Health Education Program, under the auspices of the Joint Committee on Public Health Education, has been of great value and it should be the aim of each County Society to encourage its members to take part in this important phase of health education.

It is the aim of our Society to have its members take a more personal interest in community activities, and we feel that the influence of the Society is being felt, be-

cause of the frequency with which our officers are called upon for their opinion, on matters concerning the public welfare.

Our members feel that one of the most effective means of securing community support is through newspaper publicity.

In an effort to make this publicity more effective, at the last election of officers the present Secretary, who happens to be the full-time health officer of the city of Pontiac, was elected to office. It was the feeling among the members of the Society, that the Secretary, through his official position as director of public health, and having frequent contact with representatives of the press, occupied a strategic position to aid in the dissemination of constant and authoritative information to the public. It was felt that as the Secretary, a public health official, was not engaged in private practice, he could carry on this work with more freedom than the average physician, the latter being handicapped both for time to give to the work, and by that section of the Code of Ethics relative to the advertising of the individual physician.

In Pontiac, The Daily Press, has been a big aid to the Society in their efforts to secure community support; calling the attention of the public to the activities of the Society, publishing announcements of our meetings with details of our programs.

Following our meetings we have provided the newspaper with a summary of the papers presented, together with such other information relative to the meeting that we think may have some news value.

In the final analysis, the support of the community toward the organized medical profession is dependent largely upon the physician himself. In many communities the public has lost faith in the doctor because of a false idea of his duty to the public—possibly because of a lack of sympathetic understanding toward the patient.

President Randall: There will be a good many points in connection with these papers that you will want to discuss. Your leader in the discussion will be Dr. Warnshuis.

Dr. Warnshuis: If each of you will write your expenses on a slip of paper and hand it to me before we adjourn this afternoon, I will have your voucher to reimburse you at the dinner this evening.

This evening you are to sit at the board of your parent, the State Society, as returning sons on a festive occasion.

This round table, as Dr. Randall has said, and as I intimated in the forepart of

the meeting, is the opportunity for us to secure information, to secure enlightenment upon things that may be in doubt, to discuss some of the problems you have in your community, and to indicate also to each other as well as to your state organization wherein and how we may be able to aid in solving the problems in your community.

I don't want to call on any individual to start this discussion or to participate in it except that I shall ask Dr. Knapp, who always has a fund of good ideas, just to break the ice and get off his chest anything that this meeting has inspired or any of the problems of Battle Creek, Calhoun County, that may be weighing upon his shoulders.

Dr. Harry B. Knapp: I have been much impressed by the scope of the papers we have just heard, particularly the first one which deals with methods of hanging out the bait to get attendance. In Calhoun County, since I have had anything to do with the Society, we have been working on this same problem. We have two sets of doctors in our town, those who practice downtown and those who are in some of the institutions in and about Battle Creek, of which we have quite a few.

The salient point in getting attendance, it seems to me, is to have an evening dinner preceding the meeting. Since that has been instituted, I notice that our attendance records have been better. We invite everybody, of course, to get in on these meetings; they don't all come. One dollar and fifty cents for the dinner looks pretty big to some, but the dinners at least afford a place for social contact, and I think more and more the men are taking advantage of the dinner meetings.

The programs begin at eight o'clock. A careful check is made on everybody who attends. I keep an attendance record just as strictly as an old maid school marm does of her children. I believe that is a very important thing. After a meeting, a letter is usually sent out to those who did not attend, telling them that we missed them. If we did not, we tell them that anyway; that gets under their skin pretty well. A good many of them feel that we really have missed them, at least we have noticed they were not there.

Some come and sit and listen; some come and sit. When they sit and we notice their chair is occupied, we give them credit for attendance.

The work of a Secretary is wheel-horse work; there is no question about that.

There is a lot of detail to it, there is a lot of calling up, there is a lot of writing letters, but I believe it pays. I have had a lot of satisfaction in getting contact with our men and in knowing that the County Society is a worthwhile place to go every month.

I have tried to render a little service to our Society also in the organization of a Bureau of Credits and Collections. I have felt that the ordinary commercial collecting bureau in a city does not handle doctors properly. I have felt that there are many people in every city and town who may pay their grocer all right, but they don't pay their doctor. They have to eat, but they can beat the doctor. They have a good rating on the commercial rating list, but they would have an awfully poor one if you looked at the doctor's list.

We don't know who these floaters are who go about from doctor to doctor, beating their way whenever they get a chance.

We have organized a bureau in our county, and we are undertaking to find out and list the kinds of people who are undesirable, not to keep them from getting service, but to find out who they are and then refer them to the poor commissioner for attention, where they belong.

Our bureau is simple. We get a collecting agency man experienced in this kind of work to undertake it for us as a sideline. He has put a man in charge of medical collecting in our county. He furnishes a form letter to send out, saying to the debtor: "After sending you several letters or bills we have failed to hear from you. If we do not hear from you within a week your name will be turned over to the Physicians' Bureau of Credits. There it will be listed with all the doctors in the county. We hate to do this, but if you will please let us know what you intend to do with regard to this bill, we will wait for an answer at least a week."

That collects pretty nearly fifty per cent of the hard bills. If they don't respond we turn it over to the Bureau of Credits, and they use their usual method of collecting.

This may be off the subject of Secretaries' work, but I feel it is a service to the men in the county.

There are some other lines of work which I hope to do sometime when I get around to them, but this is one of the outstanding things that I believe Secretaries can do. I believe this kind of work, with the exception of the collecting, could be

done directly through the Secretary's office if he wanted to do it and if he had a girl who could take care of a lot of detail work. We have turned it over to a special collecting bureau which is making a specialty of medical collecting.

The announcements sent out each month to the members are very important—the personal letter, the telephone call, the social features, the picnic, the ladies' auxiliary, all are attractive things, and if properly diversified through the year they are bound to make for better attendance.

Dr. Warnshuis: It is the privilege of your Secretary to preside as Speaker at the sessions of the House of Delegates of the American Medical Association, which is constituted of 175 of the best and keenest minded men of the profession in this country. One has to be quite alert in the performance of the duties of that office. There were 175 of those men up until last year, when it was changed. It is 174 men and one woman. California sent as one of its delegates a lady physician from Los Angeles.

During the sessions of the House I was somewhat disturbed as to how I might properly recognize her, and finally when the motion was made that the House go into executive session, I appointed her the sergeant-at-arms, and she officiated very efficiently. In the final hour of the House session, when the usual extension of thanks was given to the various individuals connected with the activities of the House, a motion was made that the lady delegate from California kiss the Speaker. Of course the Speaker did not recognize that motion nor put it, but to prevent our President, Dr. Randall, from experiencing the same thing, I am going to ask Dr. Florence Ames, who is the only lady doctor county secretary, of Monroe County, to tell us her troubles and what she is doing in Monroe. (Applause).

Dr. Florence Ames: I think people are the same everywhere in medical societies as well as in other activities. We have the same problems that you have. We have not done as well as Dr. Marsh has done in putting out bait to get people to come to meetings, but that is the great problem—attendance.

The people who attend regularly are the ones who suffer. I never go to a meeting and find eight or ten people there to meet an excellent speaker that I am not ready to die of embarrassment. The people who stay home never have that feeling; they are never embarrassed by the small numbers who come out to meet a good speaker. We think we have a fine town, and a great many of these people here have driven through Monroe; most of them have accepted invitations to come to speak; they do it quite willingly, and then when they come to our meetings and find just a handful, they are disappointed. It is the faithful few who do come who suffer the embarrassment.

I think we are going to try some of Dr. Marsh's schemes to get more people out.

We have a dinner meeting. We have a very nice hotel with a private dining room and an attractive place to meet, but we still have the problem of poor attendance. It is not because our programs aren't good.

We have never had an annual program. Our speakers talk on various fields of medicine, and the Program Committee works hard to get good speakers. The members of the Society know who is going to be there at least a week or so before the meeting occurs, but we do have the great trouble of poor attendance. I think Dr. Marsh has made a great many good suggestions for helping us correct those problems. I should be very anxious to hear more suggestions for getting people out to the County Medical Society meetings. That is our biggest problem everywhere. We have fine doctors and they are sociable when they do come, and they have a pretty good feeling toward each other, but they don't come.

Dr. Warnshuis: Let us have a spontaneous discussion of the problem in your counties.

Dr. Moore (Cadillac): Mr. President and Fellow Secretaries: I don't know whether Cadillac has the proper personnel in its medical society, but it does seem we have enjoyed a very good attendance and very active programs, both from the medical and the educational standpoints. I think there are several doctors in the room who know some of the activities of the doctors in our medical society. When the speaker this afternoon mentioned the community side of the medical profession, I just ran over in my mind some of the positions our local physicians have held in our community. I have been on the school board for twenty-five years and have been Mayor for six years, and one of our doctors has been health officer. Another doctor has been president of the Rotary Club, another has been president of the Izaak Walton League, and we have held about all the offices there are in the city and in the community. Being a member of the City Commission, besides being the Mayor, that throws one in with the Board of Supervisors, which enlarges one's acquaintance in the community and makes it a county matter.

One of the strongest things I think we have had in our Society to hold our members together has been our county contract for the indigent poor. I have answered many letters and questions in regard to it

from different societies over the state. I think it has been a wonderful thing to hold our Society together.

We have a Tri-County Medical Society made up of Missaukee, Kalkaska and Wexford Counties. Our county contract for the indigent poor is for Wexford County. This is taken at our regular price for the year, and the doctors are rotated monthly in the territory in the city, and the country is assigned to the doctors in the country. This gives something in return. As long as they are members of the Society they are entitled to compensation for taking care of the indigent poor of their territory, and when they get their little check every three months, as they do, it sort of keeps them in touch with the Society.

I don't know whether we have had the most successful plan in meeting at our hospital. As you know, our hotel is under construction at the present time, which has thrown us out of a meeting place for a year. We have been holding our meetings during that time at the hospital, with a six-thirty dinner and a staff meeting afterward, with hospital reports following, and reports of cases. Whether this has grown stale or not I don't know. We think sometimes that we might accomplish more if we could get back in the hotel again and get away from the hospital and away from a little of the routine in the hospital reports and the reports of cases.

I guess those of you who work in hospitals know there is just about so much red tape, and it takes just about so long to get anything done. The time is spent and an hour is gone before you know it.

As soon as our hotel is completed we will get back into the plan of holding our meetings with a six-thirty dinner at the hotel, and then featuring three or four meetings at the hospital with a clinic.

We are situated nicely for calling on outside physicians, and we have had doctors from Grand Rapids and Ann Arbor and Battle Creek visit us several times during the year.

I always send out a return postcard, and I send a private letter as often as possible. I always have my girl telephone. I think we have a very good attendance. Of course, we have a small society. Whether the same thing would work out in a large society I don't know. We have a good attendance for a small society.

Our men enjoy your conferences, and I think our Secretary will bear me out when I say that we attend about as many of those conferences in Northern Michi-

gan as any society. You can usually bank on Cadillac being there six or eight strong.

Dr. Addison, Grand Haven: In most of the County Societies is the Secretary-Treasurer allowed to disburse money by check without a counter-signature of the President, or should he have that counter-signature?

Please, also, tell me something about honorary membership; I particularly want to know if the Society offers honorary membership to those who are eligible, or if the man who is eligible asks for it.

Dr. Warnshuis: Answering your first question, Doctor, that is a custom of the County Society relative to disbursement of funds. It is a provision, as a rule, in the by-laws. A number of years ago we had a model County Society by-laws adopted by most of the County Societies in Michigan, and it provided that the funds of the society should be disbursed upon approval by the Board of Directors by the Secretary. The Secretary collected the funds, and when he received bills he presented these bills to the Board of Directors and they ordered them paid, and he issued his check signed by himself.

I think it is just a lot of old fogey ideas to make the Secretary secure one, two or three counter-signatures upon any voucher for the expenditure of funds. As a rule, the money is not sufficient to make one desire to abscond, and secondly, the individual is usually honest when he is a Secretary because he couldn't be a Secretary if he were not honest.

As far as honorary membership is concerned, there is a definite provision in our Constitution and By-laws. Honorary membership may be conferred in the State Society by action of the County Society recommending a given man to honorary membership, and after having taken that action, they report that name to the Councillor of their District. The Councillor of the District then brings the report in at the annual meeting of the Council, which is transmitted to the House of Delegates of the State Society, and the House of Delegates of the State Society elect him as an honorary member of the State Society. You can have an honorary member of your County Society and exempt him from paying his county dues, but he can not be an honorary member and exempt from paying his state dues until the State House of Delegates has taken action.

If you elect him as honorary member of your County Society and continue his membership in the State Society and mem-

bership in the A. M. A., you must still remit his annual dues of \$10.

The requirements are twenty-five years of practice.

Dr. Addison: Must he be retired from practice?

Dr. Warnshuis: No. He must not necessarily be retired from practice. The only limitation in the State Society provision is that only one honorary member can be elected from each Councillor District each year.

Dr. Knapp: Is there provision for associate membership? We have in our community quite a few doctors in the Government hospital there and in the sanitarium, laboratory men, and so on, who are not registered physicians; they are graduate physicians, but they have not paid attention to becoming registered in the state. Can they be made associate, or is there a classification especially for them?

Dr. Warnshuis: Regarding associate membership, the County Society, as you know, is the only door of admission to the County Society, and the American Medical Association. The autonomy of the County Society has been held inviolate in that they are the judge of the men who are to be admitted to membership. In the adoption of your County Society Constitution and By-laws, you can provide, as some of our County Societies have done, for associate membership. Wayne County has quite a large list of associate members. One or two of the other counties have a similar associate membership. There is, however, no provision made in the State Society that an associate member of a County Society becomes affiliated with the State Society as an associate member.

The only thing, however, is that the man in the government service is permitted under the laws of Michigan to practice in Michigan without securing a license in the state of Michigan; because of that waiver he can be made a full member of your County Society and can maintain his affiliation with the state and the American Medical Association by being elected to membership, even though he is not a registered physician.

President Randall: Many of the hospitals in the larger cities have three or four, five or six, depending upon the number of internes. I think it would be well for each County Secretary to be especially solicitous about getting the young men to attend their County Medical Societies. That is a work that all of you should look after.

If they are as poor as I was when I was up at St. Mary's, they would appreciate the courtesy extended to them, and I know those men will be members later. We want them, because those are the men who are in good training.

Dr. Woodward, Detroit: I might mention specifically the way Wayne County handles its internes. These young internes from the various hospitals in Wayne County are given a membership in the Wayne County Medical Society free of charge to the internes, as an encouragement to bring them into the Society later on, or, if they don't happen to be settled in Wayne County, so that they will be encouraged to join the various county societies wherever they may happen to go.

Nothing is charged the interne, but in some cases the hospital authorities pay the small fee.

I don't like to let this opportunity go by without telling the members how interested I have been in listening to some of their problems and also stating that when you get down to brass tacks the problems of a large County Society and those of a small County Society are, with very few exceptions, just about similar. The big bugaboo simmers down to the attendance problem. I doubt if our percentage of attendance is any better than your small County Societies have.

It all gets back to the statement made previously, that we are all brothers under the skin, and if you want to get the men out (and this refers particularly to the male members of the profession) just feed the brutes.

One of the most serious problems confronting the larger societies of medical centers is the endeavor to combat medical service by institutions. We are in the throes of that in the city of Detroit. There is no question but that this problem becomes more or less acute, depending upon the size of the community in which you practice. It seems to have simmered down to a battle between big business and small business, the small business being represented by the general practitioner, the man around the corner, and the big business being represented by various state institutions that are being run as the result of foundations that have been endowed.

Probably the most constructive way to carry on a campaign of this sort is to organize. I was very glad to hear the gentleman from Cadillac mention the way they have been handling the indigent poor up there, evidently by zoning the county in

some way or other, and having the indigent poor work done by the profession and having them remunerated from the county or state.

In other large cities they have been able to zone their cities, and a great deal of the indigent work has been handled by the profession, for which they have had remuneration.

In the larger centers, as I see it, there is no question but that private practice has been encroached upon a great deal by the various large institutions which I have mentioned. The evil has not stopped there, but it has been extended to some of the larger hospitals. For instance, in the hospital of whose staff I happen to be a member, there is the proposition of taking people in for a flat rate. In other words, it all simmers down to the hospital itself practicing medicine in competition with the individuals who bring their patients there.

As a very specific instance, up to a couple of years ago this hospital had inaugurated (I don't know who inaugurated it) a flat fee of \$75 for which anybody could come to that hospital and be confined. That included their pre-natal care, the delivery, and ten days of post-obstetrical care. There is a lot to be said both for and against that, but when you come to consider that all the good obstetrics are not practiced in the hospital, that you men from out around the state do your obstetrical work in the homes, and when you come to consider the number of young men turned out every year from the University of Michigan and our college here and that \$75 for a confinement would look mighty darned good to them, you can see no particular reason for a hospital to give that service. They say, "Well, a patient can't afford to pay any more than that, or they can't afford to pay any more than \$50."

If a patient can't afford to pay for this service, why should she be entitled to it unless it is an indigent case? If they are indigent, let the various welfare societies care for them. I feel if there is \$50 or \$75 to be spent for an obstetrical case, it ought to go to the young fellow around the corner.

One of the problems we have now in the Wayne County Medical Society is organization. We have 1,400 active members. I am proud to say there are only about 100 delinquents. Out of those 1,400, you would be surprised how many small groups and how many differences of opinion arise on certain problems. Therefore, we are try-

ing right now (and I believe this thing is going to go across) to secure a full-time Secretary or manager, or whatever you may wish to call him. One of the chief duties, in my estimation, of this full-time Secretary will be first to organize the Society, in other words, start right at home. You can't expect to get anywhere unless you can present a pretty solid front. Then it will be the duty of this man to be a sort of go-between, a buffer, between our municipal authorities and the County Medical Society. I hope to see the time in Wayne County when there will be no health problem submitted to our Council or county authorities until it has been ratified and o.k.'d by the Wayne County Medical Society.

This same problem will confront you gentlemen in the smaller communities less acutely, probably, but we hope if we can put this across, as far as establishing better relationship between the profession and the various civic bodies with which we come in contact, it not only will be a help to the state organization, but to the various smaller County Societies throughout the state.

Dr. Warnshuis: I should like to supplement a little what Dr. Woodward has said. The problem of state medicine is stupendous, one which has engaged the attention of the profession more or less acutely in the last ten years.

There is no answer that we can make to it direct except that of organized activity. When we exercise organized activity and present our side of the question I have no fear but that justice will be done. We have to manifest our organizational activity, just as Dr. Moore in the Tri-County Cadillac District has done, just as Wayne is now awakening to, just as some of the other societies are also doing.

We know that some of this work has been the result of the enthusiasm or efforts of health commissioners, paid health commissioners of communities as well as the state. When the change of office was made in our State Health Commission two years ago, the Council had an interview with the Department of Health, and a working agreement was arrived at. The State Commissioner of Health now does not promulgate any rule or institute any activity in the nature of the practice of medicine without first discussing it with the Council of the State Society. We are sitting in on the activities of the State Department of Health.

What your State Society is doing as far

as the state as a whole is concerned—similar function should be exercised by the County Societies, as Dr. Woodward has said. You can control the situation. It only requires, as Dr. Woodward has said, organized activity and an organized front and organized representation, and you can dictate instead of being dictated to.

The problem of the hospital practice of medicine is becoming extremely acute, especially so within the last year or two, and especially so since the movement that was instituted by the American College of Surgeons. The American College of Surgeons started what I believe was a most pernicious move, in writing and communicating with the hospitals of our country, asking them to set aside a department in the hospital to which the public may come and receive a periodic physical examination at a flat fee, conducted by the staff, who are to be remunerated by the hour. If you read the Journal, you have probably seen that we opposed that. We registered a vicious protest against promulgating such a move, causing or inspiring hospitals to practice medicine.

I know, when the matter came up to our hospital in Grand Rapids, the Executive Committee of the staff caused our Board of Trustees to rescind a motion or an action whereby such a function would be performed and rendered to the public of Grand Rapids by that particular hospital. We held that the place for the individual to go for his physical examination periodically was the office of his own private personal physician, for which he pays. That is an action that I think we should sustain, and this attempt on the part of institutions to practice medicine must be combatted by the organized effort of the County Society, because, after all, fellows, you and your fellow members are the ones who constitute the staff of that hospital, and that hospital cannot render that obstetrical service or the examination service or any other service without your support.

While it is true that we have here and there in the profession certain individuals who seek for self-aggrandizement these positions, and are willing to render that type of service, the influence that you can exercise upon these men is going to enable you to prevent such a movement being started, but it indicates again why your State Society, your County Society, must be alert to these things, alert to these problems.

As big a problem also is the problem of the clinic. We have in Kent County that

same problem to contend with. We believe now we are making some headway along that line. It is a field of organized activity that is the responsibility of each individual state and county society.

Dr. Hume: I have discovered that a new light has come to the Secretary of our State Society that came to me quite a long time ago, and that is that our own organizations (I am not speaking now of the Michigan State Medical Society, but of our own organizations) have done much to throw the monkey-wrench into the gears. The thing he speaks of with reference to the American College of Surgeons is one of the most vicious things that has been done. It is not the only thing that has been done, but they have grown big and reckless and have shown their hand.

There is no question that while we have problems outside to contend with, we have some very serious problems inside among ourselves, and that is one.

I was Secretary of the Shiawassee County Medical Society, I think, about 1892. We had the same troubles then that we have now. We had the troubles of keeping up an organization, making the meetings productive of results by means of securing attendance and interest in the matters that were discussed.

More and more I have come to look upon the Secretary of the County Medical Society as the one most important individual in the whole organization, because he (or she) is the means of contact between the organization (I am speaking of the organization not as one that is to consider medical matter, but organization matters) and the public represented by the members.

As our state organization is now formed, we have a president who has nothing to do with the operating of the State Society in particular. About all he has to do is to sit there and smile and wear the tin crown while he is still the president, and then he strikes the toboggan slide when it is time for him to do that. I know when my friend, Dr. Randall, strikes the toboggan slide he will make a most graceful descent and then go way back and sit down, as a few ex-presidents of the State Society before him have done.

The Councillors bear the same relation to this Society, we will say, that our congressional organization does to our state government. The contact that the governing organization has with the members is through the County Secretary; it is not through the president of our County So-

ciety nor through any members of the County Society.

There is another point to be taken into consideration. Usually in our County Societies, if you get a good Secretary you keep him and he becomes familiar with the work. He should have the opportunity to become thoroughly familiar with all of the organization work and act as a means of contact between the Society and the members of the Society and the organization itself. It is a most important place.

I wish to say now that you who are Secretaries have to deal with the most important and most constructive work of the organization known as the Michigan State Medical Society, and also the welfare of the profession in the state.

Dr. Warnshuis: I hate to raise the question of dues, but I do want to raise it in order to make an explanation. It is true that our dues are \$10 a year. Two dollars and fifty cents of that is appropriated to the medico-legal defense, \$3 to the Journal subscription, making \$5.50, and leaving \$4.50 to defray the organizational activity of your State Society.

To some of us, dues of \$10 amount to but very little. We would readily spend that amount for a poker game in the evening, or shooting the ivories, as Dr. Marsh has said. To other members \$10 is a lot. The inquiry comes from them: What do I get for my dues?

We usually tell them that the reason they don't know what they are getting is because they are not attending the meetings of their County Societies, nor are they reading the Journal of the Michigan State Medical Society, because if they were they would know what they are receiving in return for their dues.

At a meeting over at the Gratiot-Isabella-Claire County Society about a month ago, after making a talk on dues, one of the members there said that knowing now what the state organization was doing, he was very willing and eager to raise the ante, and he suggested that while he did not smoke, each of the members could lay aside a nickel a day that buys a cheap cigar, and turn that in as their annual dues, which would amount to a little over \$15 a year.

I agree that there are some who find the dues of \$10 burdensome. We have been thinking on that subject for a long time. I am hopeful that I am going to see the days when our dues, instead of being raised, can be reduced. Yet in returns we are getting a larger dividend from our \$10

invested for our membership dues in our State Society than we are for any other \$10 that we invest.

In order to make it possible for some of the men who find this a financial burden to carry on, two years ago by action of our House of Delegates and also the Council, your State Secretary was instructed and authorized to organize what is known as our Michigan State Medical Society Endowment Foundation. At present our State Society is incorporated under an act of our legislature that authorizes the incorporation of bodies for scientific purposes and not for profit, but limits their net capital or net investment to \$50,000. The Michigan State Medical Society is a growing concern. It needs for these various activities and movements that it is promulgating, a working capital of a considerable amount, but we cannot increase the dues. I feel they should be reduced.

The solution that we are seeking is this endowment foundation, to which we hope to secure endowment contributions to the extent of \$250,000 or possibly \$500,000, given and so arranged that that endowment capital or principal sum will remain intact in perpetuity. Under that plan that endowment foundation has been incorporated and turned over to one of the large trust companies of this state.

I am not privileged at the present time to tell you of the contributions that have been made to that endowment foundation. Some of them are in wills; others are in the form of life insurance that members have taken out in which this endowment foundation of the State Society is the beneficiary. In that way, after we get to a certain amount, we hope to branch out among some of our wealthier lay individuals and give to them tangible evidence of the work that has been and is being accomplished for the good of the people by the Michigan State Medical Society, and secure outside contributions so we can have a fund of a quarter or a half million dollars invested in good securities that will yield on an average of 5, possibly 5½ per cent, which will give us an annual income of somewhere in the neighborhood of \$30,000 to \$40,000, which will enable us to carry on the work of our state organization. When that foundation has been completed and that investment made, I think then we can reduce our state dues to a minimum.

The thing we are stressing in this foundation is that the man's money is invested

in perpetuity, for all time, long after you, your children and your children's children are gone; this capital will be intact for medical and public education and to conduct the affairs of the state organization.

At the present time we can't reduce our dues. I am hopeful that possibly in a few years we may attain that goal. At the present time we must make these solicitations somewhat privately, and while we hate to have our members die, after a while when they do, as we eventually all must, the Society will benefit from it, and then posterity, if not we, will have reduced medical dues.

Our expenses are necessarily large in some respects because we feel that we are not compensating men for the time that they are giving, although we are endeavoring to defray the actual expenditures of money. Assistants who must necessarily be employed are increasing each year as these activities extend. We cannot get paid help for nothing. That is the only hope or cheer that I can give you to take back to your members, that sometime in the near future we will have a capital endowment, we hope, that will enable us to reduce the dues.

Dr. Louis LeFevre: Will you tell me how much of our dues go to the American Medical Association?

Dr. Warnshuis: Not a cent. You become a member of the American Medical Association by reason of your affiliation with your State Medical Society, but do not become a Fellow of the American Medical Association until you have remitted to the office of the Secretary of the American Medical Association the sum of \$5 a year, and for that \$5 you become a Fellow and receive the Journal of the American Medical Association. No part of your state dues or funds goes to the American Medical Association.

Are there any other questions, or does anyone have any problems to bring up?

Dr. Ward is the pioneer secretary in Michigan, I think. When I was a weakling secretary he was a wheel-horse.

Dr. Ward: I have been waiting for Dr. Hume to get this off his chest because I am always willing to wait for him to take the lead. I follow him as well as I can.

There are three or four things I should like to have discussed. One is what success you Secretaries have with joint meetings. We have had joint meetings with the hospital staff. The staff is a separate organization from the County Medical So-

ciety. For one year we attempted to hold joint meetings in the evening. They did not prove satisfactory to some of us.

I understand that in Flint they have had the same experience with joint meetings and are now divorced from the staff of the Flint hospital, the same as in Shiawassee County. After one year we decided to have our own separate meetings. I think it was two years ago in Grand Rapids that I stated to the meeting that we were not sure whether the dog wagged the tail or the tail wagged the dog; first one was up and then the other, so we see-sawed on these joint meetings.

Now we are holding the staff meetings every Friday noon at a luncheon. I understand there is a feeling that they would like to give up one meeting a month and have a noon meeting with the Shiawassee County Medical Society. We are in the habit of holding our meetings in the evening. One year we held them in the City Hall auditorium. That year the meetings were not so well attended as when we held them at the hospital. After the new nurses' residence was built, where they have a nice auditorium in the basement, we began holding the meetings there once a month in the evening.

I should like to know if any of the counties have had any experience in holding joint meetings, and how well they succeeded. Some County Medical Societies hold their meetings in the evening and some at noon.

Shiawassee County has been reported as being back of a movement to ascertain whether the law requiring registration of births without a fee was constitutional. Some of you may have noticed that statement in the public press. I can assure you that the Shiawassee County Medical Society as a society never took such action.

In December there was a motion made in the meeting that the Society stand back of one of our members who had been arrested twice for failure to report a birth. The first time he paid the fine, and the second time he proposed to fight it.

This motion to back him up in this suit was not supported. It was laid on the table and it has never been taken up since. Although a great many of the physicians of the city attended the trial, that suit has not been settled.

Yesterday I called the prosecuting attorney and ascertained from him that it would not be decided until the 27th of this month.

I say this to correct a wrong impression

which I know has gotten out. I never attempted to chase it down because when a report like that gets started you can't chase it down very well.

The Gorgas Memorial representative was the speaker of the evening at one of our Medical Society meetings, notwithstanding the notice sent out by our State Secretary to the effect that the Council had disapproved of the action and the work of the Gorgas Memorial in this state. I can explain that. The President of our Society was solicited by a representative of the Gorgas Memorial who wished to be allowed to attend and address one of the meetings, which was about the time they were to make their appearance at the hospital. Our President did not consult me. I don't know that he knew the State Council disapproved. I was not notified and did not know anything of it until the meeting had been announced.

Dr. Hume stated he had been Secretary a few years before I was. Unfortunately, every year I have said that I did not choose to be Secretary again. I was first elected in 1914, and I have never been able to get out of it yet.

I approve of Dr. Marsh's suggestion, namely, that two years be the limit of any Secretary's service and that he be a young man, and I amend that by saying, or lady.

Dr. Hume has spoken of the necessity or the probability of a Secretary after long service becoming accustomed to the work. That is true. I think there is one satisfaction in the work of being a Secretary that is very much like preparing a paper. It does the man who prepares the paper more good, I think, than any one individual who hears the paper read. It is the same in preparing good minutes of a medical meeting. It does the Secretary more good, probably, than any one who hears the minutes read.

In my early days as Secretary, there was a doctor in a neighboring town who never had joined our Society. I labored with him at different times to get him to come in. He couldn't see anything to belonging to our Society. Later when he moved to our city he became a member. One of the most satisfactory things I recall in my work as Secretary is that this same doctor was one of my most devoted admirers and always complimented me on my minutes. Unfortunately the brother has passed on to the Great Beyond and I can't read the minutes to him any more.

This concludes my broadcasting; please stand by. (Laughter).

Dr. Warnshuis: Dr. Chambers, you have done some excellent work over in Genesee County and you have had this hospital contact with County Medical Societies. Will you tell us about it?

Dr. Chambers: We have our county meetings twice a month. We have a plan there which I think is very good. I have not heard it mentioned, although I presume other counties do it.

We meet on Wednesday noon because on Wednesday afternoon very few of the doctors are in their offices, and we can have longer meetings. We probably have more attendance than we would have at any other time. The meeting lasts from twelve until one-thirty or two o'clock in the afternoon. We get a very good luncheon for a dollar.

I think an important thing to get good attendance at the meetings is the type of speaker you have. Our speakers who are very good draw larger crowds than others. We have a speaker from out of town for each meeting. We try to divide the program up among the different specialties. Of course, most of the speakers talk on general surgery or medicine, but we do have some specialties as often as we can.

I think what has been of great advantage to us this year has been the establishment of our bulletin, which is issued monthly and which announces the meeting and is received by the doctors a few days before the meeting. We announce the meetings through the bulletin, and we also announce the program that is going to be held. Then we have an abstract of the previous program, and the Secretary's minutes are published in the bulletin. Besides that, we have a few editorials, and so on. That is sent to every doctor who belongs to the Society.

We try to spread a little propaganda about attendance and post graduate clinics, and so on. I think that works out nicely, especially because it relieves the Secretary of a lot of work.

Our hospital staff meetings are separate. We have those once a month, and they are held in the evening. At those programs the local men present cases that they have had in the hospital. Often the internes present the cases. While they are not attended quite as well as the County Society meetings, yet we have a very good attendance at those meetings.

I think a medical society should meet twice a month. I think you will have a higher percentage of attendance than if you meet only once a month, because it keeps up more interest. If you could pos-

sibly issue a bulletin, it would help a great deal.

Dr. Warnshuis: We have a little over 300 members in the Upper Peninsula. The geographical location of that portion of Michigan makes contact with these fellow members very difficult at times, but I am very glad that we have represented today a couple of the counties from the Upper Peninsula. I wonder if Dr. Redwine, of Luce County, would let the boys know how deep the snow up at Newberry.

Dr. Redwine: The question I want to ask is how a fellow can get rid of this job when he once gets it. Before I came to the state I had the pleasure of having this job for eight years in the Missouri Medical Society, and I thought when I left there I left the job. Just as soon as I landed in Michigan I took it up again.

I guess we have the smallest society in the state organization. We have 100 per cent membership and ninety per cent attendance at each meeting we hold, which is probably as good as you will find anywhere. That is due to the fact that one physician always has to remain on duty at the hospital, otherwise we would have 100 per cent attendance. There are ten members and they all attend but one who has to stay on duty.

We solve the problem of the meeting simply by designating one individual and saying to him: "You are going to take care of this meeting tonight. You and your wife are going to furnish the dinner." We load in our cars and drive to his house at six-thirty, and he is afraid not to have something ready. As a result we have a good dinner. After that we have our program, and we always find it convenient to tell the lady that undoubtedly that was the best dinner ever served to the County Medical Society. When we are ready to pass on to the next one, she wants to outdo the other. For two years we have got by with that. I may have to get something new, but it has worked for two years.

In addition to our other duties we have taken on the Upper Peninsula Medical Society, which is a local organization founded, I think, by Dr. Hornbogen of Marquette. It has been meeting for thirty-one years. This is the thirty-first annual meeting. The Luce County Medical Society has agreed to take care of this meeting on August 1 and 2. If you folks will put on your old sunbonnets and bring your fishing tackle, we will be glad to have you come and see us. I think the snow will all be off.

Dr. Warnshuis: Dr. Frankline, of Gogebic, is here, too.

Dr. Frankline: Gogebic County is the farthest possible county from Detroit. It is at the point where Michigan almost touches Minnesota. It is famous mostly because it borders on the Wisconsin town of Hurley that you have all heard about.

This very geographical situation causes our greatest difficulty as a County Society. We find that our men turn out very well and are highly interested if we can get outside men of known ability to come up there and talk. We are so far removed that the expense of anybody coming from Chicago, Milwaukee or Detroit is out of the question. We often hate to ask them and we can't always afford to pay their expenses. That is our problem—how to get men up there who are willing to go at their own expense or to raise the money to pay them.

One thought suggested itself to our members, that we take a vacation in winter and have our meetings throughout the summer when many of the men from Detroit, Milwaukee and Chicago might be willing to drive up and make a little vacation trip out of it. We may put that through. I don't know how it will work.

Our men are interested if we get a good outside speaker, and they will almost all turn out. Our physicians are in the majority contract men, mining doctors who do both surgical work and internal work. That, of course, raises the question that was raised here a little earlier in the afternoon about the necessity of fighting social medicine. There is one thought that always comes to me in that connection which I am going to spill at this time and then sit down. One big feature of social medicine that is particularly objectionable is the interference of the laity in the practice of social and state medicine. If social and state medicine were entirely in the hands of physicians and controlled by them, I don't think it would be nearly so pernicious. Why, then, shouldn't the physicians make it a point to take more interest in the organizations that are formed, and serve on their boards of directors and control them? I have been more or less in public work myself and on a public salary a good part of my life, but being the son of a physician to whom ethics was a religion, I have always tried to hold up that end of it. I have been impressed by this fact very strongly, that the pernicious things that are done by lay health organizations are due largely to the fact that the physicians will not take any interest in them. In organizations in which they do take an interest, in various

tuberculosis societies that I have intimately known, where four or five physicians of the community have taken an active interest and served on their board of trustees, in child health associations and other lay organizations of that kind where the physicians have shown an interest, they have not gone very far off the track, because the presence of one or two physicians on any board of directors or in any organization, who will assert themselves and express the view of the physicians of the community, will usually dominate the situation by their very presence, and the laity will, as a rule, not go against their wishes and their opinions.

I think one of the ways to prevent social medicine from going into obnoxious channels is for the physicians to take a more active interest in these organizations which will continue to form, no matter what the medical profession may do.

Dr. Warnshuis: The function of the Council has been commented upon by one of our ex-presidents of the State Society, Dr. Hume. The Council is an active, alert body, amalgamating the interests of the various districts of the state. The time that they devote is considerable. The work that they do is not often recorded, nor do they very often get credit for what they do; yet their work is active, their work is essential in the organizational scheme under which we administer our affairs.

We have a few of the Councillors here. I wonder if Dr. Cook, representing the district from Genesee County, has something to say.

Dr. Cook: There is one little message that I want to give some of you men in the smaller communities where it is difficult for you to get a speaker, that is, a speaker who doesn't require very much expense to get there.

A few weeks ago I attended a meeting at Shiawassee County, and at that time they had a moving picture film of Kanavel's book. I have read Kanavel's book, but I don't believe I got it so clearly as I did through that moving picture. I think it was one of the most profitable meetings I ever attended.

This film is available at the American Medical Association. I don't know just exactly whom they get it from, but one of the members of the Shiawassee County Society say it at New Orleans. Dr. Ochsner of Chicago was there, and showed it.

I don't believe there is a County Society in the state of Michigan that can afford not to show that picture. It builds up the hands, it builds up the structure, it shows the different parts and the method of the traveling of infections from the point of entrance to other parts of the body. Men

who are dealing with infections in industrial surgery realize how valuable it is to know the exact processes and changes that take place and the methods of properly handling those things. I think I cannot impress that upon you too much.

The film is just about long enough to show at one meeting, and it is certainly one of the best things I have ever seen.

I have been greatly interested in your problems. I can readily understand them because the Secretaries of the different societies are constantly bringing them to the Council.

I believe one of the biggest problems I have had as Councillor is what to do when the member of one society wants to join the adjoining society in the same district. Usually it happens that it is the member of a small society who will ask for transfer, a society that can little afford to spare that member. Two members of Clinton County wanted to join Shiawassee; they are right on the county line. They have had a hospital at Shiawassee longer than at Clinton, and some of the men feel there will be a little better fellowship and acquaintance with the other society. That is one problem we have had to deal with. So far they have been unsuccessful in joining the society that they wished to join.

Dr. Chambers spoke of the matter of meeting twice a month, and he thinks the society should meet that often. I was talking with one of the members of Ingham County and he said their problem had been too many meetings; they had their county meetings twice a month and then their staff meetings, and very often the men who belonged to one staff belonged to two, and it got burdensome. They are meeting twice a month now and putting on one good, large meeting once a year, I believe. They are getting a better attendance in their county society meetings that way.

I think there is a danger that may develop in places where you have members who are on two staffs and have to attend two meetings. You can't overdo the matter and have too many meetings. The right number of good meetings is much better than too many or too few meetings. I think there is great danger in too few meetings, though, rather than in too many.

I certainly have enjoyed listening to you men, especially Dr. Hume. He has been gumshoeing around ever since I can remember, and very successfully.

Dr. Warnshuis: In regard to the film that Dr. Cook mentioned, I exhibited that film in a couple of our County Societies in Michigan. The rental of the film is \$15 a day, so you see you

are running into an expense account right away.

The purchase price of the film is \$150. It has three reels and runs about twenty-two minutes. It is a very splendid film. That opens up another avenue that is not being overlooked by your State Society, whether or not your State Society can organize a library of these films available for the County Societies. The original expenditure for the films would not be so much, and they could be sent around. The problem is the projector to show the film, which is \$250. Moving pictures are becoming a little more common than they were a few years back, and I am going to start an inquiry to ascertain in our various counties how many such projectors are available, and then, Dr. Cook, if the feature seems to be one that can be so solved, I am going to urge upon the Council and the House of Delegates that the State Society provide such a teaching library of moving picture films for our County Societies.

The program and attendance were the answer given in the questionnaire that I sent to you at the first of the year as being the outstanding problems of the County Society.

You have discussed attendance and we have discussed it with you. We still have to continue to discuss it, but the solution is only by being everlastingly after the members, as Dr. Marsh suggested.

The program must be interesting. As the doctor from the upper border of nowhere says, to secure men to come to the meeting and address perhaps ten, twelve, fifteen or twenty, entailing a large traveling expense, is a burden and cannot be borne by every County Society. They have to depend, to a considerable degree, upon the members in the County Society. In some respects that is a good fault, because it is only as we appear before medical meetings and read papers and, as Dr. Ward has said, contribute, that we become at all proficient, that we become better practitioners.

We develop speakers. We watch the speakers that are being developed in the various parts of the state, and we are recommending them to other County Societies for their programs. It also is the intention of our State Society within the next year to organize a speakers' bureau through which we will make men available to you, and give you their subjects, so that you may secure them for your County meetings to solve this problem of program difficulties.

You see we are not unmindful of those two outstanding problems that confront your County Societies.

We have another Councillor present, Dr. Urmstrom, who represents the base of the thumb.

Dr. Urmstrom: My object in coming here today was to listen to the problem of the different societies so I could help my own. I happen to be the Councillor of that District, and I have quite a little to learn about the duties of a Councillor.

Several things have come to my mind today as problems of the County Secretary. Several men spoke of the length of time they have been serving as Secretaries. We have a very efficient Secretary in our Society of Bay County; he is present today.

We have two meetings a month, and the attendance is high. I think we have one of the best medical societies in the

state, both with regard to the attendance and the number of speakers we have. During the past several years practically every speaker has been an outside speaker.

I think the Secretary should be re-elected year after year, because he knows the duties of the Society; and he also should be a member of the Program Committee. We have a Program Committee appointed by the President each year. We have one that has become so efficient that we repeat it every year, practically. They know how to go about the business, they know how to have good meetings. After each meeting the Program Committee arranges a social meeting, which stimulates interest, and as a consequence we have had some very high class men this last year.

Another point which enters my mind, which is a duty of the Secretary and which I think we should change, is this: Each year we send delegates, according to the number of members, to the State Medical Society meeting. As you know, very few members of your Society attend the state meetings and know what is going on in the state. I didn't attend when I first started to practice, because I couldn't afford to. In later years after I got interested in the meetings, and after having attended one, I didn't miss a meeting.

The House of Delegates are men sent there each year, without knowing the duties they are to perform. I find in the State Society each member has something to present, and the material going through the different committees and presented to the House is cut and dried and is not explained to the members, so they do not know what is going on.

I think it is a good idea to pick out a man who should represent your Councillor District, to attend that meeting each year so he can know what is going on and can have a voice in the proceedings and report back to your County Societies. The first year I attended I didn't know what was going on, I didn't know the duties, until I happened to hear something come up, and then I wanted to ask questions. My great fault is to ask questions and to try to find out what is going on.

I think it is the duty of the County Societies to know what is going on in the State Society and what your Councillor is doing in your State Society, and then to report those things to your members.

You have just heard that our Secretary of the State Society has new duties. The work of the editorial end has been taken out of his hands. Part of his duties this

next year will be to visit the County Societies. There is the opportunity to have the Secretary explain to those members who do not attend regularly the State Society meetings, what is going on in the Society. They, therefore, will benefit, and the members of each Society will be brought more in contact with the State Society. I know very few of our members attend the State Society meetings, and they are not interested, but once they get it thoroughly explained and they come out to a meeting, more of them will go.

Your duty as Secretary should be to continue in the job, report at these meetings, know what is going on, get upon the floor, speak, ask questions, and do not be backward, because our State Secretary is here to answer questions. He may look very formidable and scare you a little, but don't be afraid of him. I attended the meeting at Mackinac Island with him, and we found him very sociable.

He can even sing. I sang with him.

Dr. Warnshuis: Dr. Charters represents the District of Detroit, Wayne County, our largest medical society, and is a member of the Council.

Dr. Charters: Mr. Chairman and Secretaries: We surely welcome you to Detroit; we are very glad to have you.

We are getting along very fine in my District. There are a few wrinkles that need to be ironed out, but they will be taken care of very shortly. The problems that the smaller society Secretaries have do not enter into our problems. I have nothing to say in that regard, therefore, but I wish to welcome the Secretaries of the different County Societies to the Wayne County Medical Society during this day and this week of clinics. We should like to have you come up to the Maccabee Building, which is our Wayne County Medical Society building. We serve lunch every day there at a nominal cost. Make that your headquarters while you are here, and we will be delighted to have you.

I wish to draw to the attention of the Secretaries of the different County Societies, our Surgical Bulletin. We are very proud of that Surgical Bulletin. It took a great deal of effort to work up the Bulletin to the efficiency which it has attained this last year. We have had to ask for funds to help us along, but we feel it is worth while. We want every Secretary of the State's County Societies to feel free to write to us, and we will be only too glad to send you a copy of the Operation Bulletin for every day.

Last year we listed 30,000 operations in

the city of Detroit, ninety-six every day, and in that array of operative work surely you can find something of interest to you. We would be very glad to mail this to you at any time you contemplate coming down here. We will be very glad to welcome you into our Wayne County Medical Society rooms, which you will find very, very fine.

I am delighted, of course, to have you here in Detroit. It is the first time you have met in Detroit since I have been a Councillor.

We have with us today, and I am going to ask him to explain a little in detail about our Surgical Bulletin, with your permission, Dr. Whitaker, who is the Chairman, and who has been the wheel-horse of the Surgical Bulletin of Detroit, and I think has worked it up to a great state of efficiency.

Dr. Whitaker: Dr. Charters presented our views very well, but I am glad to have this opportunity to draw to your attention the Bulletin. About four years ago it was hoped that Detroit would develop into more of a medical center than it had been in the past, and that the question of post graduate clinics would be developed further.

While Dr. Stapleton was President of the County Medical Society here, he appointed a committee consisting of a member from each hospital of the city, and formed a special committee of the Wayne County Medical Society, called the Detroit Clinical Bulletin Committee. This Committee publishes the Bulletin daily, receiving each afternoon from each hospital the clinical program which is to be presented at the hospitals the following day. It is the wish of this Committee that the Bulletin will be of service to every member of the medical profession in Michigan. As you all from time to time come to Detroit, I hope you will let us know when you are coming and let the house secretary of the Medical Society know you are coming and she will be very glad to arrange for you to receive the Bulletin during your stay in Detroit.

If I may enter into your discussion one minute before I sit down, I should like to say that the answer to this problem of attendance at the County meetings may be found if you will announce in your programs that there is to be a little medical economics discussed, and perhaps the activities of the various social agencies which are encroaching on the practice of medicine; I am sure you then would have to enlarge your club rooms and that you would not have small meetings any more.

Dr. Warnshuis: In my citation of the activities

of the State Society, I told you about the Medico-Legal Defense Committee and the protection that it afforded you. I told you that later in the afternoon the Chairman of that Committee would be present and would present the subject to you a little more in detail.

Dr. Tibbals, who has officiated as Chairman of our Medico-Legal Defense Committee since that feature was instituted and that part of our State Society work was undertaken, is now with us and will talk to us.

Dr. Frank B. Tibbals: Dr. Warnshuis tells me I have but five minutes, and that doesn't even get me started, so I am not going to talk about what I would ordinarily talk about if I had plenty of time to talk about it. I am going to come before you County Secretaries with a personal request. The occasion for this request arose through my letter to Dr. Warnshuis a month or so ago asking him to send me the list of local members of the Medico-Legal Committee, one member of each constituent society, supposedly being elected annually.

He replied to me that he had received the names of only about a dozen men, which means that either in seventy-five per cent of the County Societies no man has been elected recently, or the Secretary has been a bit remiss in not forwarding that name to the State Secretary.

I am quite anxious to have these representatives elected in each County Society. I don't blame a lot of you Secretaries for letting the matter go, if you are the men who are responsible for that, because in many of the County Societies there has been absolutely nothing for these local representatives to do; in some counties in the state we have not had a suit. But in many of the counties these men have been exceedingly efficient aids to the Chairman of the Medico-Legal Committee in getting at the facts in suits or threatened suits and in preparing for the defense of the matter. It is my hope that I may be able to do a little more work along these lines myself by annually at least getting in touch with the local members of this Committee.

The Secretary in each County Society is really the man behind the gun. In many counties he might be the man to whom the malpractice suit or the threat of suit is first reported. That would depend somewhat upon how active your local member of the Medico-Legal Committee is and how well known and how popular he is.

In many counties, Kent County, for instance, Dr. McBride has been a wheel-horse there. He has been on this Committee ever since this work was started, and he is so well known in this work in Kent

County that men report to him, and he is an efficient aid to me in handling these matters.

It is my hope that in every county in the state we may develop men who will be equally useful. Sometimes I do not get the exact facts. The doctor, not appreciating the medico-legal importance of absolute frankness, may overlook certain things which if they come out for the first time on trial may have a very damaging effect. I have found that the local member of the Medico-Legal Committee is a very efficient aid in getting at the exact facts. The facts as they really occurred are what we want to know. We want to be prepared in advance to meet the facts of the other side by knowing all that can be possibly known about the case. It is when something is sprung on you unexpectedly which you never dreamed of and which the defendant doctor had forgotten or preferred not to mention that you are up against it.

I think I have had my five minutes. I should like to talk longer, but this is my request; that when you go home, in each of your County Societies where a local member of the Medico-Legal Committee has not been elected for 1928, you elect one at the next meeting and notify Secretary Warnshuis of your selection.

Dr. Warnshuis: Just as you men gaze about you and watch the activities of the live organizations among your brother or sister County Societies, so too do State Societies gaze about the country and watch the activities of other state organizations. There are outstanding ones in the national work as there are in the state work represented by the County Society.

One of these outstanding organizations is the New York State Medical Society. As I have told you, Dr. Ross, of New York, is going to address us on the legislative problem tonight. He is also a Councillor and an active member of the Council and of several committees in the New York State Medical Society, and I am going to ask him to be frank in a New York way and tell us what he thinks of our meeting and give us any suggestions he can for our County Secretaries to take back with them.

Dr. W. H. Ross: I would not attempt to cover the whole ground, but I have made some interesting notes. Several things are of special interest, and there are other suggested things I can take home that will be of very splendid use.

I am particularly interested in just the touch of social and state medicine. We have a problem in New York that is going to go through the House of Delegates this year. There is a scrap on in Cattaraugus County. There is a great demonstration there. They carried it on five years, and then by manufactured lay support they

got it going again for another year, and the doctors are up in arms, and very rightly so. That is a very interesting thing. The remedy is exceedingly interesting. We have concluded that the fault is largely the doctors themselves, because they have not taken a sufficient interest to become members of the various committees that would control the situation.

A number of problems that have been discussed this afternoon lie largely in the doctors' hands. If the doctors would become sufficiently interested, we could control practically all of these problems.

In my own county we once had an attendance problem, and we have not nearly so great a problem in that respect now, because we found out just what the men want and just what interests them. We haven't the problem with speakers that you have, because we can get them much more easily.

This meeting is one of the best Secretaries' meetings that I have ever seen. You have spoken honestly and frankly. So often that cannot be quite done, but you seem to have presented the problems that actually occur. It is so natural and so good to hear it, that I am going to say something at the next trustees' meeting of the New York State Medical Society about several notes I have made here.

One thing that interests me very much is your endowment foundation. We are trying to do the same thing in New York. Our dues there are a little bit larger. Once in a while someone says they must be larger to do the work. The majority of the men say, just as you do here, you can't make them larger. The solution is to have an endowment.

We are starting the same thing, but we are doing it so far by economies in our administration, saving some of the money. Of course, I can readily understand and appreciate your difficulties, because you have smaller numbers and consequently your income is smaller. Therefore, what you do is very much more to your credit than what we do. When you think of the New York Medical Society having 11,000 members and having an income of \$120,000 a year, approximately, why shouldn't they do a great many things? And some things we don't do quite so well as you.

I wish I could attend one of these meetings once a month.

Dr. Warnshuis: Are there any other questions?

Dr. E. M. Highfield: The other evening when I was just starting to carve a roast for some doctor friends, a doctor came to

the door and wanted to know why he wasn't elected to the County Society. Some eighteen months ago we had a man come to the county and, as is customary, we sent him an invitation to come to the County Society. We took him to the Lansing meeting and endeavored to make ourselves good fellows. Pretty soon his competitors found he was saying and doing things that they didn't look upon as proper. They requested me not to invite him to our meetings any more. He came in the other day and applied for membership by transfer from Wisconsin. As we were not going to have a meeting and it required sixty days for the transfer to be reported on, I returned it to him, stating the facts, and said he could do as he wished about it.

He secured another one later and sent it in, so that we were obliged to refer it to the Committee on Membership. That Committee chose not to report back; they chose a way of killing the thing in committee, like they do at Lansing.

The doctor came in the other day and wanted to know why he didn't receive a notice. I told him that the Committee had never reported that thing out of their Committee. He wanted to know what was going to be done about it, and that is what bowled me over—the question as to what we could do about it.

Naturally we would expect to be influenced by his doctor confreres in his own county, I told him. He said, "What could I do about getting in now when one is the President and the other is the Secretary?" That is the question, and it has not been answered. I should like an answer to it.

I have enjoyed the papers very much, particularly Dr. Marsh's suggestions. I always get a lot of good suggestions when I come here. I usually come here to soak up a lot of stuff.

As to attendance; we have found that we get the best attendance when we have a dinner in the evening. Of course, there is the question of dues and the price of the dinner, and a lot of things that have to be managed the best way we can manage them.

I want to emphasize what Dr. Cook said about the film. It is certainly very good, and if it can be brought about that we can have others like it, it will lessen the work of the County Secretary very much, because he can get that reel on short notice. I presume we will get it depending on how much you men ask for it and how much you instruct your delegate to see if

the State Society can't spend a little money and start those reels and arrange so we can get them. I think the difficulties could be overcome, and I think the films would make very good programs that could be worked in on short notice.

Often a man sends word at the last moment that he cannot come. Some men come to contribute to a program without any preparation. Of course, we don't ask them back again. We know there is an excuse for it, that they are busy men, and they think they can write out a few notes on the train, or they see by the train schedule that they have a couple of hours after their train arrives before they are called on. There is always a reception committee to take them around, and the result is they don't get a chance to make any notes, and they don't have a very good speech ready. That is part of the program—to get a man who is a good talker.

We find that the men who are teaching their subject every day are better able to present the subject. The man who is doing general practice or some specialty work, if he is not teaching that subject and not expected to teach other doctors, is not always prepared to present the subject well.

Dr. Warnshuis: That doctor wants to become a member of your County Society because your County Society is a live organization. It is something that is worth while to him, and for it to be worth while. You again are the goat. I would go to that man and tell him that his application is held up because of the action or the methods that he has employed in his relationship to his fellow practitioners and that they are not in conformity with the policies and principles of your County Society, and that up until the time that he does conform to the practices and the ethics of your County Society he is not going to be a member; that you will place him on a period of probation, for six months, if you like, or a year, and if at the end of the year he shows that he wants to affiliate with you and with your organization and make himself amenable to the customs and practices and courtesies of your County Society, he can be elected to membership.

Dr. Ward: There is one subject that has not been touched on, which is the subject of the ladies' auxiliary. One of my daughters married a doctor in Bay City a year ago last winter, and I have heard her say so many things about Dr. Foster, whom I first met today, that I should like to have him tell us something about the ladies' auxiliary in Bay City. She says they have wonderful times up there.

Dr. Warnshuis: May I precede Dr. Foster for a moment and state that the State Council and the House of Delegates have endorsed the movement and sponsored the organization of the Michigan State Medical Society's Woman's Auxiliary and that the present officers are Mrs. Kiefer, the President, and Mrs. J. McIntyre of Lansing, Sec-

retary. They have written and are writing to the various County Societies, urging the organization of auxiliaries, and they are going to have a state meeting of the ladies at the time of our state meeting here in September.

If you haven't in your County Society appointed a committee to arrange for the organization of a local auxiliary, you are urged to do so by your Council, and then to get in touch with Mrs. Kiefer or Mrs. McIntyre. The auxiliary can be made a potent aid to the Secretary as well as to the County Society.

Dr. Foster: I thought human nature was the same all over, but I find that we differ from Dr. Marsh's outfit in that he says most of his members won't talk and discuss. Up in our country we try to keep them from talking. I have been trying to keep quiet today to see what I could learn.

We found our attendance going up, for no reason that was apparent; it surely was not the Secretary's fault. The first thing we noticed, the women were meeting the same night the men were, and there was nobody home to get the supper, so the men had to come to the meeting. It is a fact that the men came to the meeting because there was nobody home.

The women, probably due to their intuition, have suddenly become imbued with the idea that the County Secretary is the work horse and that when their notices are to go out and things of that kind are to be done, he is a pretty good fellow to do them. That started in our county, but I believe it has been headed off.

We have really found that the woman's auxiliary has been a big boon to our attendance simply by meeting the same evening at a dinner meeting, but at some other place, not at the place the men meet.

Dr. Warnshuis: Are there any further questions?

... The meeting recessed at five-ten o'clock ...

MONDAY EVENING SESSION

May 14, 1928

The meeting following the dinner was called to order at seven forty-five o'clock by the President, Dr. Randall.

President Randall: The subject tonight is Medical Legislation. We have two speakers, one from New York State and one from Michigan. The history of medical legislation is one that goes back a good many years. The Babylonians, the Egyptians, the Romans, and every country and state have had different propositions to solve. The medical profession today should read the old criminal medical code of Hammurabi, in which there is the provision that if the doctor treated a slave and lost

a slave, he had to furnish a new slave; if the slave was cured, he got fifty cents; if it were a member of the royal household or family who died, the penalty was much more severe.

The first time in the history of the world that there was ever any attempt at medical legislation was in Frederick II's time. Mind you, in the days of Hippocrates and Galen there were no medical laws, no medical restrictions; anyone could practice medicine. When Frederick II promulgated his laws, they were more strict than they are today. It required two years of pre-college work in logic before one could study medicine.

France struggled through the period of her surgeons, master surgeons, barber surgeons; England went through the same process. The apothecary became the practicing physician through the modification of the law.

In the early history of America we had about 30,000 irregular practitioners. In the early days there were only a few hundred men who had ever seen the inside of a medical college.

Michigan, in its early days, had the examination of candidates for practicing medicine by the State Medical Society, until a few years ago.

The practice of medicine is not a natural right. It is a grant by the state of the privilege to practice a certain following. This right to practice medicine is subject to revocation for violation of certain laws. The state requires registry each year; it can require that every year you be re-examined in your subject. It is a police power of the state, and when you come to police of the state it is unlimited.

A good many solutions have been thought of as the best thing to do to protect the medical profession and also to give the people the best kind of service.

Tonight we have the privilege of listening to Dr. Ross, who, by the way, is a country practitioner, and who is interested in medical legislation and has come here to tell us of the experience that they have had in New York State with the various laws and to advise us what we should do in the future in regard to asking the legislature to pass certain laws. Dr. Ross of New York. (Applause).

... Dr. W. H. Ross read his address. (Paper No. 3) ... Applause). See Original Articles this issue.

President Randall: I am sure that Dr. Ross has given us a great many things to

think about. On the other hand, he has given us a good amount of sound advice.

It was my privilege this year to appoint a committee to study the matter of the regulation of the healing art by law and to report at our next state medical meeting. I looked around the state for men to compose that committee, and I don't know that the Secretaries know the personnel of the committee. Dr. Kiefer is Chairman; Dr. McIntyre of Lansing, Dr. John Sundwall of Ann Arbor, Dr. Jackson, Dr. McClintic of Detroit, Dr. Marshall of Flint, constitute the committee. I think you will have to go a long way to beat that committee.

The committee has been working on this problem. It met two weeks ago in Lansing, and Dr. Kiefer will tell you tonight about how far they have arrived in their work.

When it comes to state medicine, social medicine, I am awfully glad Dr. Kiefer is State Health Officer. If anyone has any fear of Dr. Kiefer's going into state medicine, I think he need only know the work that he has done and hear him talk once or twice to know that the profession of Michigan feels it has a friend over in Lansing. For that reason I had the honor of appointing Dr. Kiefer Chairman of that committee. (Applause).

Dr. Guy L. Kiefer: Mr. President, Secretaries of the County Medical Societies, and Fellow Doctors: I intended to give a very brief progress report of the work done so far by your Legislative Commission, and I will do so, but I want to say first that the splendid, enlightening address given by Dr. Ross tonight will be of very great service to all of us, and particularly to your Commission, which is working on this very same subject.

Maybe I should say to some of you who may not possibly have been at the last State Medical Meeting in Mackinac, that at that time, having been in the position of State Health Commissioner for a period of a few months, I stated some of the policies that we proposed to adopt, that we had adopted, and that we are now pursuing. Those policies are: As close cooperation with the medical profession as the medical profession will allow us to have. We do not propose to introduce and we have not to this time introduced anything new nor have we continued anything old in the work of the Department of Health that has not first been submitted to the Council of the State Medical Society and has been approved.

It was after the statement of such policy that the delegates of the State Medical Society passed a resolution (I might perhaps better say that the resolution was passed after a splendid address on the need of medical legislation by Dr. Jackson, the outgoing President), giving the President of the Society the right and instructing him to appoint a Legislative Commission to take up the study of this matter.

As Dr. Randall has told you, he conferred upon me the honor and placed in me the confidence, as representing the medical profession, of being Chairman of this Commission.

I assure you that we don't propose to go very far with this without consulting others of the profession from all parts of the state. It is, therefore, a great privilege to be able to address so many of the Secretaries and so many of the County Societies tonight and let them know something about what we have in mind.

After we get all through compiling a tentative law or having it compiled and properly corrected by legal talent, we will, of course, submit it, as it is our duty to do under the resolution, to the meeting of the State Medical Society this fall in Detroit for consideration and correction and amendment.

If you read the current number of your State Medical Journal, as you all should have done, you would have found in it some of the things that I am going to tell you, but fearing that perhaps it has escaped some of you, I will take the chance of repeating.

The first thing that was done by your Commission was done by the worthy Secretary of the Society and of that Commission, Dr. Frederick C. Warnshuis, who had sent out to every Secretary of every state registration board in medicine in the country and to every Secretary of every State Medical Society, a questionnaire, the object of which was to get some information about the registration laws in the various states, about the opinions of the Secretaries of the various Boards, and the opinions of the Medical Societies represented by the Secretaries of the various medical societies.

We received answers from all of them, and strangely enough we received contradictory answers as to how these various laws were working and how they pleased the profession, from the two people to whom we wrote letters, namely, the Secretary of the State Medical Society and the Secretary of the state board of regis-

tration. But we compiled the results as best we could; they were compiled in the office of the President of the Commission, and we put down briefly a statement of what was considered the most important by the Secretaries of the registration boards in their various laws, and we put down the opinions of the various medical society Secretaries.

Then we had a meeting and we considered these abstracts and these various laws, and everybody had a chance to study them after the meeting and to determine what things in the laws seemed to be the most urgent for initiating.

Some of the members of your Commission have thought, and I know that a great many physicians throughout the state have thought, that we have now a fair medical registration law. Its principal weakness seems to be in its enforcement, in the lack of power to enforce it. There doesn't seem to be any provision made for that.

It has been considered dangerous in the past, since 1902 when I think this law was enacted, to attempt to make a wholesale revision of the law. Dr. Hume looks at me rather curiously when I make that statement, but he knows he is one of those who has considered that a rather dangerous proceeding.

We have used all our forces and expended all our energy in trying to keep down unnecessary laws by the various cults. The only other cult that may now register under a separate board in Michigan is the osteopaths. They have a law which allows them to be registered. The chiropractors have not succeeded; they came pretty near it. At the last session of the legislature they came so near it that the law was only defeated in the upper House the last day of the session by two votes. It was due largely to the efforts of a medical man in the Senate, Dr. Green, of Richmond, Michigan, and Senator Engle of the upper part of the state at Lake City, that this law was finally defeated. Senator Engle made a speech in which he recited some experiences of the treatment of diphtheria in his county and in his city by chiropractors, and succeeded in swinging the vote the right way.

Our present registration act or law has upon its board and therefore has recognized regular practitioners, homeopaths, eclectics, and physio-medics. In other words, they are represented by membership on the board, and they have in the past been recognized. Physio-medics are dying a natural death, and the eclectics are

following close suit. Homeopaths are becoming regulars.

We have considered what should have been the principal things that a new medical registration act or law, or a law outside of such a law, should contain. By a law outside of such a law I mean possibly a basic science law or something which may be called similar to a basic science law not necessarily requiring the basic sciences as they are generally considered.

We considered at our last meeting a tentative law which does not touch the present act that registers physicians. This law that we have considered does not mention doctors or any cults. It speaks of the science and art of healing in no way whatsoever, and it provides for a separate board of educators to pass upon anyone who desires to take up the study and finally admitted anywhere for the purpose of practicing the science and art of healing in any form whatsoever.

We have thought that perhaps if the minimum requirements to enter the healing science in any way were made sufficiently high, if persons were required to have a certain amount of learning in sciences and perhaps in languages and other knowledge, they would then not choose to continue by taking short courses in chiropractic or some other cult and becoming anything but physicians, but would continue and become doctors under our regular requirements. That is one of the thoughts that we have considered as we have gone along.

Personally I am rather inclined to believe that that would go a long way toward solving our difficulty. If we decided to do a thing of that kind, then we would not touch the present practice act; we would then require everyone who desired to be allowed to study the art or science of healing to practice it in any way whatsoever, to have, for example, a qualified (and in this extent we have already described exactly what we mean by qualified) high school course, and to satisfy the Board of Examiners that he has had such a course by a thorough and proper examination, and then he would be required to take two years, sixty hours, of college work in the proper prescribed college, which would be designated in the law, and would have again to satisfy the Board of Examiners that he had such knowledge and that he had such courses and that he was able to pass an examination on such courses.

Dr. Ross brings to us some thoughts very strongly in favor, it would seem to

me, of this Commission taking right hold and going at it and revising and rewriting the entire medical practice act. Having some of the essentials that he spoke of, first a proper definition of the practice of medicine, it seems to me that is one of the things that we must consider now, whether we make it in one way or whether we make it in another form, that we have a proper minimum requirement of education (that I have already described—it may be done in one way, or it can be incorporated in the law), that we have a provision for the enforcement of this law by the attorney general's office. That, by the way, is in our tentative law now, because we have felt and we have known—those of us who have been more or less active in trying to protect the practice of medicine and in trying to overcome the arguments of the cult—that when we tried to prosecute anybody for practicing illegally, it has always been difficult to get a local prosecutor who has local alliances to take hold of the thing; whereas, if that were passed over to the state's attorney's office it would be a more satisfactory way of handling it. That we have considered very carefully.

Dr. Ross spoke of some other things which I want to call your attention to that exist in Michigan today. I think I can say without any fear of being mistaken at all that we can readily get the lay support that he has pointed out that the passage of such a law requires. I don't want to seem to be selfish or to talk ego at all, but with the sincere co-operation that you are getting from the Department of Health, I am sure we can because of their co-operation with us, get such associations as the Parent-Teachers' Association, the Michigan State Tuberculosis Society, the Federation of Women's Clubs, and others that were mentioned.

This Commission has considered having a lay committee of prominent citizens, men and women, appointed to help the furtherance of the passage of this law. That might be a good thing to do. I am telling you the things that we have considered. This is simply a progress report. We have not concluded anything. I am telling you, however, because I think it is a privilege to be able to tell the Secretaries of our various County Medical Societies these things so they can go home and get the sentiment among their constituents.

This meeting ought to be far-reaching. There are men from all over the state; there are men from the counties of the upper peninsula, from the lower peninsula,

and from the central part of the state. We want you to know what we are thinking of, so when you get home and talk it over with your members and get suggestions, you can let us have them. We would a good deal rather have them now and pick out those we think will meet with the co-operation and consensus of opinion of the profession of the state so we can present something at the State Medical Society that will be accepted and adopted.

I want to assure you of another thing that you may or may not know; that this is the psychological time to undertake such a revision of our practice act, because we, too, as New York has had for a number of years, now have a governor who stands for better practice of medicine and the protection of the medical profession and the people by helping us create better doctors and better practice. I know that; the members of the Commission know it; your Secretary, Dr. Warnshuis, knows it. We have been told by Governor Green: "If you fellows will get busy and get up a law to get rid of this everlasting fighting with a lot of cults every two years, that shouldn't practice on human beings, I am with you and I will help you see it through."

It seems to me, with all those favorable things, with the fact that we can get some of this help that it has been pointed out to us we must have, with the fact that we can get the help of the governor, this is the time for us to go right ahead with our work.

The words of Dr. Ross have been not only enlightening, but they have been very encouraging. They were very encouraging to me and I know they were to the rest of the Committee, all of whom are here with the exception of Dr. Marshall. That shows their interest in this matter.

If there are any suggestions, even as early as tonight, we should like to get them. We want a law that will pass, first of all. You notice, Dr. Ross said they had the best law that could be passed in New York at this time. Whether he had in mind that it might be improved sometime if possible I don't know, but that is the best that any state can hope for. We want to get for all of us the best law that the legislature of Michigan will stand for at this time.

That brings in another thing. We were advised in our first meeting by a prominent member of the legislature, how to proceed. I told him what we were doing and that we were going to try to get up some-

thing to submit to the State Medical Society in September. He said, "Good Lord, if you wait until September you are all done. You want to get this thing lined up before these fellows get to Lansing; you want to get your men in the state to find out who is going to the legislature and let them know that you are going to have a law that will be worth while, and get their support before they ever see it."

He said, "Another thing you want to do if you can is to get some doctors into that legislature."

It seemed to us when he got through talking with us (of course, he is a man who has had a number of years of experience in the House), that he knew what he was talking about. I think the very experience last year and another time in a previous year when we had Congressman Bohn of the upper peninsula and Congressman Green, who succeeded in defeating the chiropractic bill, with some little help, should warn us to get busy right away.

You men come from various parts of the state. You have well organized County Medical Societies. You probably know who are your aspirants for the office of legislator, and if you haven't as yet any candidates, it seems to me it ought to be possible to get a few doctors into the legislature. Legislative action is not always done on its merits; it is done very frequently by trading, and a doctor in there might be able to vote for some laws that didn't make any difference as to their existence except that they were unnecessary and superfluous, and in that way he might gain some votes for our medical practice law.

Those are some of the things we have thought about, and I am very glad to have had the opportunity of pointing out to you some of the things that you can do now to help this Commission. This Commission can meet, they can read between meetings, they can study up these various laws, they can get such information as we all have received tonight, and they can put their heads together and devise the very best thing they know how, and then they can submit it to you for your approval or disapproval; but in the meantime you can do a lot to oil the machinery and get the thing started so when we do get ready for it we will be successful. (Applause).

President Randall: We are going to allow you to discuss this subject.

Dr. Hume: I am pleased to be here tonight, because I have a clearer conception

of what the Committee is proposing. My belief is that the judgment of the Committee is very good indeed and that the easiest way, the best way, is to wipe out the old law that we have and have an entirely new one.

Dr. Kiefer is perfectly right in that I have always advised, from my experience in the legislature, wiping out all that we have and coming out with this kind of proposition that can have back of it the medical men in the state. We can show clearly that this is for the public good, for the benefit of the people, and in no wise is it legislation that is asked for by the doctors for their own benefit.

Dr. Jackson, Kalamazoo: I should like to ask Dr. Ross what are the arguments for the annual registration of physicians?

Dr. Ross: Every doctor in the state of New York receives a list of those who are registered, with the request that if he knows of anyone in his community not on that list, he notify the Secretary of the State Board of Medical Examiners or the Secretary of the State Society. It is for the purpose of furnishing the roll call and keeping it up to date. We think it is a very, very effective thing. It carries with it a fee for registration, and that fee provides for the permanent organization for the purpose of administering the law. Otherwise, if we didn't have an income from that we would have to have an appropriation by the legislature sufficient to pay the expense of administering the law.

Dr. Jackson: Is there any objection to that fee?

Dr. Ross: There was a lot of objection while the bill was being formulated. It took several months to do it, and we had to have meetings all over the state. When it was finally presented, one county, with quite a large number of doctors in the county, opposed it quite strongly. They spoke against it, though the rank and file of that county did not oppose it. There was not much objection. Today there is no real objection, although in Kings County if you ask if they are entirely in sympathy with it, many of them will tell you they are not.

Dr. McIntyre, Lansing: How much is the fee?

Dr. Ross: It is \$2.

Dr. E. M. Highfill, Gratiot: How is that administered?

Dr. Ross: The active administration of it is through the Secretary of the State

Board of Medical Examiners and seven inspectors. We send these inspectors out to get the evidence. You can notify the Secretary of the Board of Examiners of any irregular practitioner or anyone practicing medicine in your neighborhood. You do not have to come out in the open and be in the position of having made the charge. They send an inspector down there. You could report me as an irregular practitioner in your neighborhood and I would never know where it started.

Dr. Moore, Cadillac: I just want to add to the word that has been said about the good work that Senator Engle did. I don't want to take any honor myself for our Society, but I must say that he was coached by our Society. He is an attorney, and he just got us to coach him, and he gave as good a medical talk and as good an argument as any doctor in this room could give. He argued in concrete cases. We happen to be in a hotbed of chiropractors. We have one chiropractor in our city who served fifteen months in jail on three different occasions.

I think it is within the power of every physician to make a friend of his Senator and Representative. It is done in business, and it is done socially. Get him out and take him on a fishing trip or a hunting trip, or get him into a poker game. Get under his skin. Don't let him know what you are doing when you are talking to him, but get him so full of it that he is just all for you.

Senator Engle has just had a lot of experience with diphtheria in Missaukee County. I guess Dr. Kiefer knows something about that. Wexford County has immunized its entire school population and a good many of the pre-school age pupils with toxin antitoxin. Missaukee County didn't do it. Missaukee County has some physicians practicing there who do not belong to our Society. They have had all kinds of trouble. I know of several mothers with ten or twelve children in the family who were using these physicians. Senator Engle will certainly be loaded, and so will our Representative.

We have had a small epidemic of scarlet fever in Cadillac all winter long, and quite a bit of it is due to two local chiropractors. They have promised to be good. Our chiropractor who served fifteen months in jail, wrote a very nice letter to the Health Department; it was a masterpiece. He certainly made friends with the local Health Department; they thought he was a very fine gentleman. But he proceeded to go

right home and call on acute disease cases. Those men advertise in the paper that they treat acute diseases; and they do that so as to get the acute diseases to treat.

Just as long as a chiropractor is allowed to treat acute diseases, sore throats, and the like, we will have trouble. I don't think any doctor can diagnose scarlet fever if he doesn't see it at the right time.

We had the experience this year of teaching the public something. Every time a pupil is out of school for three days, they must get a permit from a physician before they can re-enter school, and we have not recognized the permits of chiropractors.

I had a very good family that I did quite a bit of work for, but they fell in love with a chiropractor, and they had him treat the children with their acute scarlet fever. We kept them out of school, and we continued to keep them out. When they came for a permit they had to come to me. I said I didn't know what was the matter with them. They sent the little boy in, and I asked him if his little baby brothers and sister's hands were peeling. He said, "Why yes." They hadn't coached him well enough. I immediately took the health officer and went direct to the house, and we found the two children with their hands peeling. No health officer can control scarlet fever as long as you have chiropractors practicing medicine.

I think it is a good suggestion for every physician and County Secretary to take home to the local societies to cultivate the acquaintance of the Senators and Representatives and then your problems will be solved. You have to do it on the banks of a stream or in a hunting camp or in a club room or a noonday luncheon club or some such place as that where you can get right next to the fellow.

Dr. McClintic, Detroit: The idea that Dr. Kiefer has impressed upon us, I think most of us feel would eliminate the chiropractors. It is interesting to know that the chiropractors have to meet the requirements of the so-called basic science law. The doctor said he didn't know how they were registered. Because of that, some of us feel that the basic science law is inadequate to keep out the quacks, the chiropractors, the fake healers, and others.

Another objection I have to the present medical practice act is that I think too much is left to the discretion of the Board. I don't think it is a good law to have things left to the discretion of a committee which in turn is not a police organization.

There are one or two other things that

I think Dr. Kiefer did not emphasize that are worrying some of us somewhat. One is that most of us feel we must have an injunction clause in our new state law so that as soon as we find one of these cultists violating our act, immediately we can have an injunction issued against him and prevent his practicing medicine until he comes to trial. The point of putting the enforcement act into the attorney general's hands, as Dr. Kiefer mentioned we are contemplating, I think is going to be a far-reaching step if we get the law enacted in this state, because certainly at present we have no very effective machinery.

I did not quite hear what Dr. Ross said as to the enforcement organization. It has been puzzling us a little as to what sort of organization we should have created in our act to enforce this law in the event that we have it enacted.

After listening to a review of the history of New York, I think we certainly have all come to the conclusion that this is an eternal fight. They have evidently been fighting on Manhattan Island since the sixteenth century, and they are still fighting and probably will have to continue to fight. The way I look at it, it will be a continuous battle.

Dr. Warnshuis wrote me a letter the other day, wondering if we got a good law enacted if another bill wouldn't come along and exempt some of the cults from the enforcement of this act.

As I see it, the only way we could ever get a permanent law that would not be too open to attack every time the legislature meets would be to have an amendment to the State Constitution. We must be eternally vigilant about this matter in the legislature.

I am thoroughly convinced or converted to the idea that we should have in the legislature some good, wide-awake doctors. I think occasionally some one of us should be able to go to Lansing for one or two sessions, and then we could come back and let others take our place, and keep a few wide-awake men in the House and Senate all the time. I feel we should be so able to frame our law that we can make the academic requirements that we are going to ask, apply to all these people who seek license to practice any sort of healing art whatsoever. As a matter of fact, we would probably catch the nurses and dentists. So I think we will have to except the nurses and dentists, or the first thing we know there will be no one left in the state to do anything for the suffering except the doc-

tors. I feel if our law is enacted and properly enforced, we will really have the screws about where we want them.

I certainly enjoyed Dr. Ross' enlightening talk. On the other hand, I also trust we may still have suggestions from the County Societies over the state.

There isn't any question that one of the things we have to do first is to convert the medical profession to these ideas, and then depend upon the medical profession to create enough interest on the part of the public to put this thing across. We are eternally faced with the accusation that we are a medical trust and that we have selfish motives in seeking to promote our own interests in raising the standards for the practice of medicine. We certainly should disabuse the minds of the public as to that. We are fortunate that we have begun already. I am rather inclined to think that these lay organizations will be of great help in putting this thing across. The first thing is to sell it to the doctors; that is sometimes just about as difficult as to sell it to the laity.

Dr. Sundwall (Ann Arbor): I know we have gained much from Dr. Ross' visit and his very able paper this evening. His summary I think should be remembered by everyone. He emphasized teamwork; no medical body can do this work alone. It took New York a great many years to appreciate that fact. I think it is one that we should think of very seriously in our future efforts toward improved medical legislation in the State of Michigan. I think we have many opportunities for getting this team work. I believe that in the State of Michigan we have, relatively speaking, as many intelligent and at the same time aggressive voluntary health agents as they have in New York. Dr. Ross has called attention to the work of the Charities Commission under Homer Foulke, and contributions along that line.

Perhaps we as the medical profession have not been as energetic in the past in our efforts to have associated with us these various lay organizations. I know them pretty well, I am quite familiar with the various voluntary health organizations in Michigan, and I know that they are very anxious to help us.

There has been a tremendous development in the education of the public along the lines of preventive medicine in recent years. Take our efforts along the lines of child hygiene; take the tremendous growth in school health work in the state as well as in the country as a whole. Then we

can take into consideration the development of public health nursing, and I could go on and speak of the other voluntary associations that are doing this work.

I think in our future efforts toward getting the right type of legislator and our future efforts toward proper medical legislation, we should ever bear in mind the importance of this excellent summary of Dr. Ross that the medical profession cannot do it alone. That has been the mistake in all of our past medical licensure and legislation—we depended upon the medical profession.

I think on the whole most people react emotionally toward medicine. By that I mean so far as their bodies are concerned, whether in order or out of order, most people take an emotional reaction. I am speaking of the public at large. To the public at large we are just as much of a cult as is the chiropractor or any other form of irregular practice, and, of course, that has been the great point in the past.

What I want to suggest in particular is that in our various county societies sometime between now, let us say, and the next month or two, if each County Medical Society would put on a special meeting when the time is right, a meeting which would include, let us say, the Parent-Teachers' Association, a meeting which would include the authorities of the public schools, including the teachers as well as the members of the board of education and those who make up the board of control, including the visiting nurses' association, the public health association, the representatives from all of the welfare agencies, and then explain to them just what we have in mind in this legislation, I am certain your work would be very much facilitated.

Again, in conclusion, let me remind you of that summary, that the medical profession cannot do it alone, and we have a very intelligent, strong lay organization in this state interested in voluntary health work that is more anxious to co-operate with us if we will just reach out and invite them.

Dr. Hume: I may say frankly that there is one way that they have of doing things in New York that does not meet with my approval. We are asking, in behalf of all of the people of Michigan, for certain legislation for their protection. Isn't that what we are asking? Isn't that why we want this law? It is not for our own protection, is it? We have been charged with that, that it was for our protection alone and therefore that it was a doctors' trust. If we claim that it is not

a trust, that it is for the benefit of the people generally, then why should we pay the expense of the enforcement of that law? It is a fatal error, I think, and it is the thing that has stood against this matter all the way through the law that we have. I am opposed to that idea. If this is for the benefit of the people of Michigan and this legislation should go through, it should be enforced and the expense of the operation of it should be carried by the people of the state of Michigan just exactly as the expense of the operation of Dr. Kiefer's office is carried by the people of the state of Michigan. It is for their benefit and they should pay for it.

Dr. Ross: That is a splendid argument, and we down deep in our hearts feel that it ought to be so, but we couldn't do it that way, so for the present we do it the other way. We pay for it, and soon the public, especially with the propaganda that is coming from the lay health organizations, are going to convince the state that it was done for their good, and then we hope to make an exception and relieve ourselves of paying \$2 a year for registration. We had to do it that way.

I think that remark that it was the best law we could pass in New York State at that time was said with that thought in view.

Dr. Warnshuis: I should like to convey to the Secretaries and the members of the Legislative Commission and also the Councillors who are present, the appreciation of the Council of the State Medical Society in the contribution each one of you made in giving your time and attending this conference today. I hope that each one of you has gained a broader and deeper insight into the activities of your state organization, and also has gained the knowledge that your state organization cannot exist without the co-operation of the County Medical Societies, and that after all is said and done it is the County Medical Society that determines the achievements that organized medicine is going to acquire and attain in Michigan by the degree and activity that you manifest in your county organization. That is why we ask that as you go back home you report these activities to your County Society and let your members know how essential it is for them to remain interested and to make their contribution to the furtherance of these movements that are being wrought primarily for the benefit of the public, but also at the same time not unmindful of the interests of the individual doctor.

As has been said, your officers of your State Society, your Council, your Secretary, purpose to come to you in a closer and more explanatory manner than in the past, in order that you may gain an insight into the activities that are being fostered and so secure your interest, and in securing your interest secure your support.

Again I thank you in behalf of the Council and the officers of the State Society for your presence here today.

. . . The meeting adjourned at nine-twenty o'clock . . .

CHIPPEWA COUNTY

The regular monthly meeting of the Chippewa County Medical Society was held at the O'Jibway Hotel April 19th. The meeting was preceded by a dinner with Dr. C. J. Ennis as host. The entire program was devoted to a discussion of better business methods among physicians and the elimination as far as possible of the "Dead Beat." This subject was discussed freely by all present. The question of procuring a contagious hospital was also taken up, and after much discussion, Doctors Moloney, Webster, Conrad and Bandy were appointed as a committee to form plans as to the cost, the type and size of building needed and the ways and means of securing same. Recommendations to be made at the next meeting.

To Dr. C. J. Ennis our host for the evening, we express our appreciation, both for the wonderful dinner and for suggesting a meeting of this kind to be held.

F. C. Bandy, Secretary.

LENAWEE COUNTY

The regular monthly meeting of the Lenawee County Medical Society was held at the Lenawee Hotel in Adrian, Thursday, April 19, 1928.

The meeting began in the usual manner with a dinner at 6:30 p. m. There were 21 members present and as guests we had Dr. James E. Davis, Pathologist at the Detroit College of Medicine and Surgery as the main speaker of the evening, and we were also greatly honored in having with us our State Society President, Dr. H. E. Randall and our Councillor, Dr. James Bruce of Ann Arbor.

Dr. Davis gave an excellent address on "Inflammation of the Kidney." His anatomical description of the kidney was so clear that one could see it in their mind almost as clearly as if the dissected organ lay in front of him. His classification of the different kinds of inflammation was simple and very clear. When he had completed his talk every one present realized that they had a better understanding of the logical method of treatment of nephritis than they had ever had before. Dr. Davis truly handled his subject in a masterful manner.

Dr. Randall then gave a short talk on the advantages of organized medicine and also gave a brief outline of the year's program of the State Society. He also stressed the importance of co-operation of the County Society with the State Society.

Short talks were given by Doctors Morden and

H. H. Heffron of Adrian, Veazey of Hudson, and Westgate of Morenci on what they considered were the greatest problems in their respective communities affecting the medical profession.

The meeting was brought to a close by Dr. Bruce who answered questions pertaining to present-day medical problems in general and those affecting conditions locally.

R. G. B. Marsh, Secretary.

KALAMAZOO COUNTY

The regular meeting of the Kalamazoo Academy of Medicine was held April 17th, 1928 in the Academy rooms. Following the dinner the meeting was called to order by the President, Dr. W. E. Shackleton.

The minutes as printed in the bulletin were approved.

There was no report from any of the committees.

The letter from the Parent-Teachers Council was discussed by Doctors Boys, Hubbell and Crum. Dr. Hubbell explained the function of the annual May clinics and informed us that they were sponsored by the American Medical Association. He believes the Academy should co-operate with the Parent-Teachers Association in doing this work.

Dr. Crum moved that the Academy support the pre-school clinic as it is the opinion of the Academy that this type is a good thing for pre-school children. Supported and passed.

The Secretary has informed the Parent-Teacher Council of this action.

Dr. Jackson talked on the proposed change in the Medical Practice Act of this state. Dr. Jackson is a member of a commission appointed by the State President to study and formulate a practice act to be presented to the next legislature for consideration. This act, he states, the commission wishes to reflect the opinions of the members of the State Medical Society. The new practice acts that have already been passed by some states were discussed and some of the benefits and advantages encountered in those states were related. Opinions regarding the new practice acts may be found in the J. A. M. A. of April 4th and 17th, 1928. Dr. Boys moved that the Academy is willing to support the commission in any decision they might arrive at regarding this matter. Supported and passed.

The scientific part of the program was given by Dr. Paul G. Magnuson, Associate Professor of Surgery, Northwestern University. His talk and lantern slides dealt mostly with lower back pain and old ununited fractures of the neck and femur. His methods of correcting this disability are certainly worthy of consideration as his results have been uniformly good.

SAINT CLAIR COUNTY

Regular meeting held at the Harrington Hotel, Port Huron, Michigan, Thursday, May 3, 1928. Supper was served to seven members at 6 p. m. and the meeting called to order by President Smith at 8 p. m. with the following members present: Smith, McColl, Burley, Bowden, Morris, Reynolds, Patterson, McKenzie, McCue, Meredith, Waters, B. E. Brush, Howard Brush, Attridge, Callery, Kesi. Caster, Windham, Heavenrich, Thomas and Sites. Rev. Young, Pastor of the

Ross Memorial Congregational Church was present as a guest.

The minutes of the preceding meeting were read and approved. Communications were read as follows: A letter from the State Department of Health advising the Society that whenever lectures were to be given in Saint Clair County due notice would be given the Society and all members were invited to attend same; a letter from the Bay County Medical Society inviting the members of Saint Clair County Society to attend a meeting to be held in Bay City on May 18, 1928, at which time Dr. E. Starr Judd of the Mayo Clinic would deliver an address; a letter from the Chicago Great Western Railroad advising of the service that road was prepared to give from Chicago to Minneapolis and Rochester, Minnesota at the time of the meeting of the American Medical Association this summer. Nine members signified their intent to attend the meeting at Bay City and the Secretary was instructed to so advise the Bay County Society. Dr. J. A. Attridge announced a meeting of the Hospital Board to receive an individual from Bay City with reference to putting on a drive for funds with which a new hospital unit might be constructed. Dr. George Waters informed the Society that the Hospital Board had adopted a resolution to make an inquiry of the American College of Surgeons with regard to having a representative of that organization visit the city and survey the situation and that a committee had been appointed to obtain the permission of the Port Huron Community Welfare League to put on a campaign for funds. The President asked the Society their pleasure as to the next meeting; whether same should be held at the Saint Clair Inn, Saint Clair, Michigan. A motion was made and seconded to hold same at Saint Clair and postponing the date until May 24, 1928, so as not to conflict with the clinic week in Detroit. Carried. Dr. Smith appointed a committee of Dr. Carney and Dr. MacPherson to make arrangements for the meeting at Saint Clair Inn and also instructed the Secretary to make an inquiry of the committee whether the members of the Society could meet early in the afternoon of May 24, 1928 on the links of the Saint Clair River Golf Club for a round of the game.

Dr. D. J. McColl entertained the members of the Society with a very interesting and graphic account of what he observed during his visit to Hawaii last spring. He touched upon medical conditions in the islands, the wealth, beauty and future of this territorial possession, the sugar cane and pineapple industries, the irrigation system, the tremendous yield of sugar cane averaging from eleven to seventeen tons per acre as compared with two tons in Cuba, the patriotism of the native Hawaiians, who, no matter of what race, were very loyal to the United States and resented any suggestion to the contrary.

Dr. McColl also spoke of the climate and stated the temperature range in the City of Honolulu to be from sixty to eighty-four degrees Fahrenheit. Owing to the trade winds the heat is not sultry. The speaker described the City Hospital of Honolulu known as the Queen's Hospital at some length, covering the endowment and management of same, the tract on which same was located being so beautiful and large, covering thirteen and one-half acres, the hospital being a four-story concrete building of very modern construction capable of caring for three hundred and seven patients. Besides the visiting staff, the institution has five internes, forty-one graduate

and forty-six student nurses and other personnel making in all about two hundred employees. The Social Service organization in connection with the hospital and also the Social Service Center where the free clinics are held was very highly complimented by Dr. McColl. The speaker then described a routine day's work of a physician and surgeon on the Island of Maui, where he had the pleasure of being with the doctor for the entire day. In conclusion Dr. McColl touched upon his visit to the Tuberculosis Hospital on the Island of Maui, an institution of one hundred and eighty beds, where, according to the physician in charge the disease may be cured in one-half the time required anywhere else in the world except the other islands of the Hawaiian group; and to the Leper Hospital where there were one hundred and fifty-nine cases under treatment. The President thanked Dr. McColl for his most interesting talk.

Before adjournment the President appointed a committee of doctors, Meredith, Attridge and Thomas to investigate an educational advertising proposal of the local daily. Adjourned at 9:30 p. m.

George M. Kesl, Secretary.

MARQUETTE-ALGER COUNTY

I wish to report the April activities of the Marquette-Alger County Medical Society.

The April meeting was held in Ishpeming at the American Legion Hall on the 17th. After a delicious dinner at which forty members and guests were present, the usual business meeting was held. This was followed by a very interesting paper by Dr. I. Sicotte of Michigamme on his experiences in European clinics in 1927. Dr. C. W. Hopkins of Chicago, Chief Surgeon for the C.N.W.R.R. and ex-president of the National Association of Railway Surgeons gave an exceptionally interesting and instructive paper on "Fractures" illustrated with lantern slides.

The May meeting is to be held on May 15th at Marquette in conjunction with the Marquette County Dental Society at which time the main discussion by both groups will be "Focal Infection."

Russell L. Finch, Secretary.

The Marquette-Alger County Medical Society held its regular May meeting in the Hotel Clifton on Tuesday evening, the 15th. The members of the 16th District Dental Society were guests of the Medical Society.

The main speaker of the evening was Dr. E. G. Robbins of Ishpeming who read a paper on "Mouth Infections" with special reference to oral sepsis. He spoke of the enlarging scope of the dental profession during the past few years; of Rosenau's work at the Mayo Clinic and his theory of "elective localization" and the results obtained; of the close relationship between dental foci of infection and chorea, iritis, gall bladder disease, etc. Dr. Robbins covered the different dental conditions together with X-ray interpretation of these conditions. In conclusion he emphasized the two main means of prevention of oral sepsis, diet and repeated systematic examinations of the teeth. Practically all present entered into a discussion of the paper and it was thoroughly enjoyed by all.

Dr. Paul Van Riper stated that Dr. H. L. Loveland of Republic was leaving for Tecumseh, Mich.

to make his home. The following resolution was adopted:

"We are informed that Dr. H. H. Loveland of Republic, who has been an honored and respected member of this Society, since its organization, intends to leave us at an early date. As an expression of our respect for Dr. Loveland both professionally and socially, we offer the following:

Resolved: That this Society take this means of expressing to Dr. Loveland our sincere respect and admiration for him as a physician and gentleman. We sincerely regret the loss of his companionship and we wish him most marked success and happiness in his new location."

The problem of caring for tuberculous children was again brought before the meeting and a resolution was adopted as follows:

"The Marquette-Alger County Medical Society, fully aware of the necessity of the care of tubercular children in this county, as well as the prevention of tuberculosis in children coming from tubercular families do hereby urgently request that the Board of Supervisors take immediate action to provide a separate building for the care of these children."

The next meeting will be held in July and will be in the form of a picnic at Champion Beach. The Dental Society will be cordially invited to meet with us at this time.

Russell L. Finch, Secretary.

AS THE SCIENTIST VIEWS EVOLUTION

Medicine is a branch or specialized department of the biological sciences, namely the biology of the human animal. Among the approximate eleven thousand members of the American Association for the Advancement of Science are the names of a large number of physicians, both those in active practice and holding full time professorships in medical colleges. Since opposition has been offered to the teaching of evolution, the following recent opinions of men very prominent in the scientific world are presented. In his annual address at the Nashville meeting of the American Association for the Advancement of Science, President A. A. Noyes says: "In the meantime in the biological sciences the existence of evolution as a fundamental phenomenon of life was established by converging evidence from paleontology, embryology, genetics, and comparative anatomy, with a certainty comparable with that of the Copernican conception of the solar system. While even less can be said today of the processes by which evolution takes place than was thought to be known fifty years ago, the facts that evolution has been going on and that many animal and plant types have gone through definite stages of development can only be doubted by an individual who like an ostrich buries his head in the sand out of a vague dread that he may see something shocking."

Science Service is authority for the following: "The meaning of evolution is probably more misunderstood than any doctrine of science. The misunderstanding has arisen from ignorance of the subject, from misinterpretation of the statements of scientific men, and from what may be called a medieval attitude of mind. It has been a shock to educators to realize that there still remains such a mass of untrained minds that can be imposed upon by eloquent ignorance."

With these sentences Prof. John M. Coulter of the Boyce Thompson Institution, Yonkers, N. Y., and formerly head of the botany department at

the University of Chicago, opened his lecture here this evening, at the New York Botanical Garden.

Opponents of evolution who state that the doctrine has been cast aside by scientists are either self-deceived or deliberately deceiving others, Prof. Coulter declared. What is being cast aside is not the idea of evolution itself, but many of the formerly accepted explanations of how it came about. Evolution becomes more firmly entrenched every day in the minds of scientists as new facts continue to accumulate, but while these new facts make the probability of the evolutionary process ever stronger, they are themselves so many and present such complicated problems that the question of how evolution happens becomes ever more difficult to answer.

The teaching that acquired characters can sometimes be inherited, long denied, is now beginning to find friends again, Prof. Coulter stated. This doctrine of evolution was advanced by Lamarck, long before Darwin's time, but seemed to have been shoved aside by Darwin's alternative doctrine of constant, small, spontaneous variations acted upon by the process of natural selection. The force of natural selection is still admitted, at least in part, but the usefulness of small variations has been called in question by many biologists.

The mutation theory of DeVries, which substitutes sudden origins of new forms at a single leap for the slow variations conceived by Darwin, is still widely accepted, but doubts have been thrown on its validity in many instances, and even its own author has accepted some cases of apparent mutations as being due to the sorting out of hybrid characters.

Yet in spite of all doubts and questions as to method, the fact of evolution remains unshaken, the speaker declared. With evolution, the living world is a single unified picture; without it, creation is chaos, and no single fact has any necessary relation to any other fact.

In conclusion, Prof. Coulter cited the great practical value which the study of evolution has had in its applications to the bread-and-butter problem of agriculture.

"The statement was made that during the 10 years preceding the great war our population had increased 20 per cent and our food production about 1 per cent. It was certainly an alarming outlook," said Prof. Coulter. "Under these circumstances plant crops began to be studied from the standpoint of genetics, and plant breeding became a science."

"The lack of crop production arose chiefly from three causes, namely, lack of adaptation of crops to environment, destruction by drought, and destruction by disease. The same races of plants were being cultivated everywhere, and only in certain places was the maximum result obtained. A study of races of crop plants throughout the world, and of the environment necessary for maximum yield, resulted in such an adjustment of crops to conditions that total food production was enormously increased."

"The problem of drought is being rapidly solved by the discovery or development of drought resistant races, not only insuring against loss from this cause, but also enormously increasing the possible area of cultivation."

"The problem of disease has been attacked in the same way, and disease resistant races of most of the important crops have been developed, much reducing loss from this source."

"As a result, food production is now beginning to overtake population, and we may thank the persistent study of evolution for the result."

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

LOCAL ANAESTHESIA—A Short Course for Students and Surgeons—Geza de Takats, M. D., M. S., Assistant Professor of Surgery, Northwestern University Medical School, with a foreword by Allen B. Kanavel, A. B., M. D., D. Sc., Professor of Surgery, Northwestern University Medical School. Illustrated. W. B. Saunders Company, Philadelphia and London, 1928.

This work is, as its subtitle implies, a short course in local anaesthesia for students and surgeons. The reviewer has followed out the methods taught and his testimony as to the practical value of the book is very favorable. To those doing minor surgery or operative work which lends itself to local anaesthesia this work is strongly commended.—W. D. B.

A BOOK FOR US DIABETICS AND OUR DOCTORS—Don H. Duffie, M. D., of South Lancaster, Mass., U. S. A. Published by the author. Price \$1.50.

This is a book for the diabetic patient. It is well illustrated and printed in large, clear type that makes easy reading, and we had almost said in words of one syllable, however, that is probably going too far. It is free, however, from technical language. The little book, we feel, would serve a useful purpose, especially in the hands of an intelligent diabetic who appreciates his condition sufficiently to co-operate with his physician. Dr. L. H. Newburgh of the Medical Department of the University of Michigan has written a foreword in which he concludes "By the use of this book nearly every diabetic should be able to learn those things which will make it possible for him to live his normal life in spite of his disease."

PHYSICAL DIAGNOSIS—W. D. Rose, M. D., Associate Professor of Medicine in the University of Arkansas, Little Rock, Ark. Fifth edition: 310 illustrations and three color plates. C. V. Mosby Company, St. Louis, 1927. Price \$10.00.

This text book is intended for the use of the medical student and the general practitioner. The author has revised the work and given particular attention to the heart stressing the manifestations of early cardiac insufficiency.

SPECIAL CYTOLOGY—THE FORM AND FUNCTIONS OF THE CELL IN HEALTH AND DISEASE—A textbook for students of Biology and Medicine by Doctors Leslie B. Arey, Percival Bailey, R. R. Bensley, C. H. Bunting, Alexis Carrel, A. E. Cohn, G. W. Corner, E. V. Cowdry, Hal Downey, G. Carl Huber, J. Albert Key, E. B. Krumbhaar, Albert Kuntz, Leo Loeb, C. C. Macklin, M. T. Macklin, E. F. Malone, Frank C. Mann, David Marine, A. A. Maximow, Edward B. Meigs, C. W. Metz, W. S. Miller, Eugene L. Opie, Wilder Penfield, A. T. Rasmussen, J. Parsons Schaeffer, G. E. Shambaugh, P. G. Shipley, G. N. Stewart, Charles R. Stockard, D. L. Stormont, Frederick Tilney, T. Wingate Todd, G. B. Wislocki. Edited by Edmund V. Cowdry. Two volumes, large octavo, 1376 pages, with 693 illustrations. Handsomely bound in waterproof sturdite. Price \$20.00 net. Paul B. Hoeber, Inc., publishers, 76 Fifth avenue, New York.

This unique contribution to the knowledge of the form and function of the cell in health and disease, is a welcome addition to medical literature. The animal cell has long been recognized as the all important unit in the animal organization, but it has been only within the last two decades that the cell itself has been the subject of critical examination from the standpoint of structure, contents and function.

The newer cytological concept indicates the cell not merely as a little bag of living jelly, but as a microcosm whose complex structure exhibits a specific organization, each of the component parts having an important bearing on intra and intercellular regulation. As instance of this, it might be pointed out that the non-nuclear cytoplasm of a gland cell possesses a small network of fatty protoplasm—the Gogli apparatus—which is closely related with the secretion process of the cell. In the thyroid gland this structure migrates from one pole of the cell to the other, depending on whether colloid is being formed in the gland or secreted into the blood stream. It is an intracellular organ for secretion. Then there are minute bodies called mitochondria which seem to increase and decrease in number according to the phase of cell function. Attention might also be called to chromidal substance and the formations of stored material. Certain pathological conditions which may not distort the histologic appearance of a tissue are associated with specific anomalous intracellular phenomena.

Cytologists and microchemists have investigated the physical and chemical aspects of the living cell as well as the preserved material. Stains have been perfected which will stain the living cell and not interfere with its function. Through their application the metabolism of the individual cell has become an object of study. It has been possible to operate on living cells to remove parts and to inject foreign materials. The chemistry of the intracellular fibrils of nerve, muscle and connective tissue and the secretions of bone, skin and cartilage cells has accumulated much of interest in the economy of the organism.

Few of these data have been available to the physician as the literature is scattered and there have been no summaries. Dr. Cowdry and his co-authors have performed an important service in this the compilation of information. The physiology and pathology of the tissue groups have been stressed as a fundamental theme so that the book is designed to appeal to the medical practitioner. The thirty-seven sections are logically grouped according to the organ systems with which they deal. An ample index renders any point of detail available in a moment. The general physician will find this cytology a valuable addition to his library; the dermatologist, endocrinologist, hematologist, neurologist and cardiologist will likewise find much in it of use.

Authenticity is derived from the carefully selected list of contributors who rank among the foremost men in the American medical schools.—W. T. D.

CRAWFORD W. LONG, THE DISCOVERER OF ETHER ANAESTHESIA—Frances Long Taylor, with a foreword by Francis R. Packard, M. D. With eight full page plates. Paul B. Hoeber, Inc., New York.

This is an interesting and affectionate biography of Dr. Long by his daughter. It is an account of Dr. Long's early work in connection with the discovery of the anaesthetic properties of sulphuric ether. Packard in his introduction says "that Crawford W. Long was the first man to use

ether for the purpose of producing surgical narcosis, and W. T. G. Morton was the first to demonstrate its use before a professional gathering." Besides the importance of the work as a medical biography, we have an intimate picture of social conditions both before and following the Civil War.

RECENT ADVANCES IN BIOCHEMISTRY—John Pryde. Second edition, 379 pages, 38 figures. P. Blackiston's Son & Co., Philadelphia, 1928.

This revision of Professor Pryde's work adds to the first edition the progress of the past two or three years in the rapidly growing field of physiological chemistry. The book is in no sense a textbook or reference book but rather a delineation of recent concepts in biochemistry. The reader will find a clear and concise summary of the latest researches on the chemistry of animal life. There are chapters on tyrosine, nucleoproteins, vitamins, haemoglobin, chemotherapy and immunological reactions.

THE USE OF SYMPTOMS IN THE DIAGNOSIS OF DISEASE—Hobart Armory Hare, B. Sc., M. D., L. L. D., Professor of Therapeutics in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; ninth edition, thoroughly revised. Illustrated with 124 engravings and four plates. Lea and Febiger, Philadelphia.

In this day and age of the development of laboratory technic it is refreshing to read such a book as this which lays stress upon the objective manifestations of disease as observed in the patient himself. The author has wisely omitted any mention of laboratory aids to diagnosis which are so well taken care of in a number of first class text books. We have here an evaluation of symptoms by a master. Dr. Hare has been a long time before the medical profession in the capacity of author on clinical medicine and on therapeutics. The fact that the present work is now in its ninth edition would testify to its popularity with the medical profession if nothing further were said. The plan of the book is commendable as well as simple. Symptoms are discussed first, dealing with them regionally, namely the face and head, the hands and arms, the feet and legs, the skin, the tongue, mouth, pharynx, esophagus and abdomen and abdominal viscera. Then finally is a discussion of such manifestations as chills, fever, headache, vertigo, coma, pain, cough, exportation, tendon reflexes and muscle tone. The author has been guided by the following bit of philosophy: "In the diagnosis of disease it is essential that the physician rests his opinion not upon one or two symptoms, but upon a series of symptoms which when properly put together give him a complete or nearly complete picture of the malady." This work is well written and well illustrated. It is unique of its kind and will be welcomed by those who would keep alive the art of medicine.

INTERNATIONAL CLINICS—Volume 1, thirty-eighth series. March, 1928. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. J. B. Lippincott Company, New York.

In medical history there is an appealing article entitled "The Renaissance," by Dr. John R. Oliver. For those interested in the use of light, the article entitled "A Quarter of a Century in Light Treatment at the London Hospital," by W. J. O'Donovan, will be of interest. Dr. Lewellys F. Barker of Baltimore discusses intestinal amoebiasis and syphilis in the same patient. For the surgeon, "Uterine Fibroids," by Dr. John B. Dawe and "Operations and Demonstrations at the Chirurgische Universitäts Klinik, Frankfurt-on-Main,"

by Prof. Victor Schmeder. The 1927 Mutter Lecture of the College of Physicians of Philadelphia is given by E. Starr Judd, M. D., his topic being "The Pathogenesis of Gastric and Duodenal Ulcers." There is a resume of the progress of medicine during 1927 and many other interesting and instructive articles which help to keep the busy doctor up to date.

STRABISMUS, ITS ETIOLOGY AND TREATMENT—Oscar Wilkinson, A. M., M. D., D. Sc. Surgeon in Chief of Washington Eye and Ear Hospital, Washington, D. C. Illustrated. Price \$10.00. C. V. Mosby Company, St. Louis.

This volume digests the published workable knowledge on the subject. The author combines this with his own practical experience and so produces a treatise on this important division of ophthalmology which makes the book a valuable reference.

GYNECOLOGY FOR NURSES—Harry S. Crossen, M. D., F. A. C. S., Professor of Clinical Gynecology, Washington, University Medical School, St. Louis. 365 illustrations, including one color plate. Price \$2.75. The C. V. Mosby Company, St. Louis.

This work is for nurses and as such admirably fulfills its purpose. A brief account is given of the anatomy and physiology of the pelvic organs. The details of gynecological nursing are dealt with at length. It will be found not only a suitable text book for nurses in training, but it is a valuable reference work for the office nurse of the gynecologist.

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In many cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

SEX AND DIGESTIVE ORGANS ARE PRINCIPAL PREY OF CANCER

"If, in some manner or other, malignant tumors of the alimentary tract and of the reproductive organs could be prevented, cancer would retire at once to a relatively unimportant place among the causes of death."

This statement was made by Dr. Raymond Pearl, director of the Institute for Biological Research of the Johns Hopkins University after the completion of a statistical survey, made by himself and Miss Agnes Latimer Bacon, on necropsies performed on fatal cancer cases in the Johns Hopkins Hospital.

In summarizing the results of the survey, a report of which will appear in a forthcoming issue of the Archives of Pathology, he stated that in men, malignant tumors occurred more frequently than anywhere else in the organs of digestion, such as the stomach, intestines, gall bladder and liver. In the women the cancers were found in the productive organs. These conditions are in general agreement with the cancer figures of the U. S. Census Bureau, he pointed out.

"The greatest discrepancy between the general population and the necropsy statistics is in respect of cancer of the skin," added Dr. Pearl. "Patients with cancer of the skin die at home rather than in a hospital relatively more frequently than do patients with cancer of any other organ system. This fact means that such cases tend to be under-represented in necropsy statistics. The patient who enters a hospital with cancer of the skin in an early stage is discharged

cured. But for the patient who lets his cancer of the skin go without treatment, or with the supposedly palliative treatment of quackery, until it is destined shortly to be fatal, a hospital has little to offer."

From these studies it appears that more of the different organ systems of the body are susceptible to cancer in white people than in colored. On the other hand a relatively larger proportion of the cancers of colored people occur in the digestive system and in the reproductive system than is the case in whites. The average age at death of people with tumors that had produced secondary growths or metastases, as they are known to medicine, was found to be from one to three years earlier than in cancer cases without such secondary growths.

POST-MORTEM STUDIES ON DEAFNESS URGED

Members of the medical profession are striving to break down prejudices against post-mortem examinations. The American Medical Association has called attention to the particular need for post-mortem studies on diseases of the ear because many of the cases of deafness are still unknown. A research committee of the Association for the Hard of Hearing is making an earnest effort in this connection to have persons suffering from deafness indicate their desire that examination be made of their ear mechanism after death. In this way, it is hoped, some new light may be shed on many problems of the ear not yet uncovered by scientific research. The medicine of antiquity was at a standstill for ages on account of lack of knowledge of human anatomy, brought about by fixed racial prejudices against examination of the body after death. Consequently the necessity of more necropsies is strongly urged "that these dead shall not have died in vain." Minneapolis has an especially valuable record in this respect, higher, it is said, than that of any other city of its size in the United States. Some 1,400 necropsies were made in 1927 constituting about 19 per cent of all deaths occurring during the year in a city of approximately half a million people.—Science Service.

PARATHYROID GLAND CONTROLS SEX RATIO

The parathyroid gland apparently has a good deal to do with determining the sex of unborn offspring, according to the results of experiments reported by Dr. Simon B. Chandler of the Loyola University School of Medicine, Chicago, before the meeting of the American Association of Anatomists at Ann Arbor. Dr. Chandler removed this gland from a considerable number of rats of both sexes. Some of these he mated with each other, and others with normal rats. As a control, he mated a number of normal rats with each other. Then he checked up on the sexes of their young ones. The normal rats produced approximately equal numbers of male and female infants, as might have been expected. Those deprived of their parathyroid glands, however, showed upsets. From matings in which both parents had been deprived of their glands he got 32 males and 17 females, a ratio of nearly 2 to 1. From crossings of a normal male with an operated female, he got 18 male offspring and

only 8 female, a ratio of more than 2 to 1. It therefore appears that the presence of the secretion of the parathyroid gland in the mother increases her chance of producing daughters.—Science Service.

BRAINS OF GENIUS STUDIED

The brains of the great do not vary so greatly from those of the common or garden variety as was once believed. Post-mortem examination of the brains of G. Stanley Hall, eminent psychologist, Sir William Osler, for many years an outstanding figure in the field of medicine, and Edward S. Morse, widely known naturalist and zoologist, did not show striking variations from the normal, Dr. Henry H. Donaldson of the Wistar Institute of Anatomy and Biology told members of the National Academy of Sciences. They were, however, slightly heavier than the brains of more nearly average individuals studied for comparison. "The variations in the form of the convolutions," said Dr. Donaldson, "may mean something, but they do not explain that for which explanation is sought, for in their fundamental structure human brains are remarkably alike, and the variations in the convolutions are incidental, as the several measurements show."—Science Service.

EPILEPSY PRODUCED ARTIFICIALLY

A step toward an understanding of the nature of epilepsy, one of the most baffling of all human ills, was reported at the meeting of the American Association of Anatomists by Dr. Lawrence O. Morgan, of the University of Illinois College of Medicine. By surgical procedure, Dr. Morgan produced lesions in certain parts of the cerebrum, or forebrain, in dogs. The animals recovered from the operation, and their conduct most of the time was normal. But periodically they went into fits which in all essential respects were identical with those characterizing human epilepsy. An examination of the brains of four human beings who in life had been subject to epileptic seizures showed abnormalities of the organ of the brain corresponding to the areas where the artificial injuries had been produced in the dogs.—Science Service.

BRAIN WORKERS ARE RESTLESS SLEEPERS

Middle aged men who are engaged all day in absorbing intellectual work are more restless sleepers than their wives who keep house and play bridge, the National Academy of Sciences was told today. Dr. H. M. Johnson, of the Mellon Institute of Industrial Research at the University of Pittsburgh, presented a report of his latest experiments in sleep. A sleeper sinks to a state of minimum activity about 30 to 45 minutes after retiring, Dr. Johnson has found. For the rest of the night there is a regular wave-like alternation of stirring and quiet. A marked difference has been found in the sleeping charts of people of different vocations. The middle aged brain workers whose sleep was measured were more restless sleepers than 75 per cent of college boys, and they were more restless than skilled machinists. Children also move about more than the average college student.—Science Service.

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THE DIAGNOSIS OF GASTRO-INTESTINAL DISEASE FROM A GOOD HISTORY*

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The trouble with the average history which is taken by a practicing physician or an interne is that it is short and superficial. It does not give a clear-cut consecutive story of everything of medical interest which has happened during the life of the patient. It may open up wonderful possibilities for further questioning, but these opportunities are not grasped. Thus, it may say in the history: "In 1910 and 1915 patient had ptomaine poisoning." Go more carefully into that and you may find that others who ate the same food were not ill. Ask a few more questions and you may get a story of typical attacks of gallstone colic. That will open your eyes to the fact that the belching and heart-burn, for the relief of which the patient is now consulting you, are mild symptoms of cholecystitis which has been flaring up off and on for many years.

THE TAKING OF A HISTORY

The principal complaint. The first thing

to do in taking a history is to find out the principal complaint.

The onset. The next thing to do is to find out if the patient ever had a good digestion, and if so, just when it failed. That will give you a starting point, and incidentally a good many suggestions as to the possible diagnosis. Just suppose that a man of fifty-five comes in and says that he could digest tacks up until three months before, when everything seemed to go wrong. You can be almost certain that he has cancer of the stomach. A woman of forty-five comes in complaining of attacks of pain in the upper right abdominal quadrant with belching and bloating in the intervals. She can trace her troubles back to bilious spells and severe stomach-aches when she was a child. She has gall-bladder disease. A man with pain in the epigastrium, relieved by eating, says that he has had attacks off and on since he was twenty; he probably has a peptic ulcer. A thin little woman tells you that she has always had more or less vague

* Abstract of an address given before the Ingham County Medical Society at Lansing, Michigan, April 26, 1928.

indigestion and that she is always having to be careful about her diet; she probably has so-called functional troubles.

THE NATURE OF THE SYMPTOMS

Periodicity. The next question is: Does the trouble come in attacks? If it does, you will suspect strongly that there is some organic cause such as ulceration of the stomach or bowel, cholecystitis or appendicitis. Particularly in the case of ulcer, the characteristic feature, at least in the earlier years, is the tendency of the disease to recur after many months of perfect health. In the later years the distress often becomes more or less continuous.

A knowledge of the length of these intervals will help in making the differential diagnosis between duodenal ulcer and gall-bladder disease. Patients with ulcer generally go free for a few months or for a year or two, while those with gall-bladder trouble will often go for many years without pain. The latter are more likely to have belching and distress between attacks, while the patient with ulcer will probably feel perfectly well.

The next question is: Are the attacks getting more severe and are they coming more frequently? If so, it means probably that the disease is getting beyond medical control and that the time is fast approaching when the patient is going to be driven to an operation.

THE ESSENTIAL POINT IN THE DIAGNOSIS

When a patient comes in with a gastrointestinal complaint, the big problem before the physician is not so much the making of an exact diagnosis as the making of a decision on the following point: Is there something organically wrong which needs surgical help and needs it soon, or is the trouble functional and likely to be relieved by medical treatment? Theoretically it would be a nice thing always to be able to tell the patient exactly what is wrong, but in many instances this is not essential. He may have an ulcer of the duodenum, a diseased gall-bladder or a bad appendix; he probably has two of these and he may have all three. Fortunately they can all be attended to through the same right rectus incision so no harm is done if the deformed duodenum turns out to be free from ulcer, but adherent to a gall-bladder full of unsuspected stones.

LOCATION AND SEVERITY OF PAIN

Pain. The symptom which helps us most in this differential diagnosis between

the serious organic and milder functional disturbances is pain. Where does the pain come and how does it radiate? Ask the patient to point to the part of his body in which the pain appears and watch what he does. Some pains radiate in a characteristic way. Sometimes you will be puzzled until you dig out the fact that there are two pains, one perhaps in the gall-bladder and the other over the heart.

The next problem is to find out how severe the pain is. Is it real pain or is it only a feeling of discomfort? Was it necessary to call a doctor, and did he administer morphin? The need for morphin commonly means cholecystitis. Find out if the patient is afraid to eat. This symptom is particularly significant in a stout woman with a good appetite because if the pain had not been severe enough to frighten her she would not be denying herself.

Find out also if the pain awakens the patient at night. Anyone who is awakened out of a sound sleep at 2 in the morning and has to walk the floor for a while is not a neurasthenic; he generally has an ulcer. If he cannot go to sleep on retiring he is more likely to be suffering from cholecystitis.

Find out what brings on the pain. Is it definitely related to the taking of food, or is there no relation? The most pathognomonic pain is that which is relieved by the taking of food; as you all know, it is found most commonly in cases of ulcer.

Find out if the pain is made worse by jolting. If the patient has driven in from the country in a small car, find out how he or she stood the trip. If a woman tells you that for the last part of the journey she had to hold on to her lower ribs on the right side in front because that region was made so sore by the jolting, you hardly need a roentgenogram to tell you that she has a diseased gall-bladder.

Pain and epigastric distress requiring the constant use of soda are practically always due to organic disease. If you find that your patient has a box of soda in his pocket, don't call him a neurasthenic; he probably has an ulcer. If the pain is relieved by the passing of gas or fecal material, or if it is relieved by an enema, you will look for the cause in the lower bowel, but it may still be in the stomach. If it is relieved by the passing of a lot of mucous the patient may have so-called mucous colitis, which is not true colitis, but probably a nervous affection.

Tenderness. If pain is a symptom you

will want to know if there is tenderness or soreness in the abdomen following the attacks. Definite tenderness and rigidity of the abdominal wall appearing after an attack of pain always means organic disease of some important organ.

THE REVERSE-PERISTALSIS SYNDROME

It is important to find out whether the patient has any of the symptoms which may be grouped together in what I have called the reverse-peristalsis syndrome. These symptoms are vomiting, heart-burn, belching, nausea, a feeling of fullness as soon as the patient starts to eat, a coated tongue, a bad taste in the mouth, and a feeling of back pressure against the diaphragm. These are all signs pointing to some organic lesion which is irritating the digestive tract and sending off reverse waves. Be careful in diagnosing organic disease of the stomach or bowel in the absence of these symptoms. They may be present, however, in neurotics, in women who are pregnant or who have pelvic disease, and in men and women with pulmonary tuberculosis or other weakening diseases. In all of these conditions there seems to be a flattening or reversal of that gradient of forces which I believe maintains the downward direction of peristalsis, and under these conditions, waves can easily run backward.

Belching. If the patient belches, be sure to differentiate between true belching, which is seldom repeated to any great extent, and false belching or air-swallowing, which may be kept up for hours. Ask if there is any bloating or passing of gas. If not, it may be silly and useless to change the diet; the patient has no indigestion, and all he needs is a sedative and some will-power to stop a nervous habit.

"ACID STOMACH" AND HEART-BURN

When the patient tells you he has an acid stomach, that does not mean necessarily that he has; it means probably that gastric juice is regurgitating from the stomach, where he cannot perceive it, up into the pharynx where he can. It is one of the signs of mild reverse-peristalsis.

Nausea. If the patient has nausea, do not think of gastric disease so much as of disease of the lower bowel. If the patient is a woman, think particularly of pregnancy or disease of the pelvic organs. In young women, think also of the neuroses.

Vomiting. Find out the relation of the vomiting to meals. If it comes immediately afterward it is often hysterical in na-

ture. Vomiting which is due to actual obstruction at the pylorus comes late, after the stomach has struggled for hours with its burden of food. You will ask if the patient has seen food eaten a day or two before; if so, there is no need for pumping the stomach because you will know that there is a serious delay in emptying, and that there is probably some organic disease at the pylorus.

Loss of weight. Marked loss of weight is always an ominous symptom, but you must first make sure that the patient has not been dieting. Many women nowadays are trying to reduce; others starve themselves when they have indigestion, and others are given food which contains so little protein that they have to live on their own tissues.

Constipation. If the patient complains of constipation, the first thing is to find out how long it has been present. If a little woman tells you she has been constipated ever since she can remember, you don't worry much about it, but if a man of sixty tells you that his bowels moved perfectly until a year ago, since which time he has had several attacks of severe constipation, you must get worried and you must stay worried until an expert roentgenologist assures you that there is no carcinoma in the colon.

HEADACHE WITH INDIGESTION

Many persons with migraine go to the gastro-enterologist because they have indigestion or constipation and they cling to the hope that if only those troubles could be cured they would lose their prostrating headaches. Here again a careful history is absolutely essential because upon it will be based the diagnosis and the decision as to the mode of treatment. We get to the crux of the problem by asking: Does the patient ever get the headache without indigestion, and does he ever get indigestion without the headache? Which seems primary and which bothers him most? These questions are important because the problem is: Can this man be helped by the removal of a diseased appendix or gall-bladder, or has he the purely cerebral form of headache in which abdominal operations can do no good? If the indigestion is always secondary to a headache and if in the intervals the stomach and bowel function perfectly, there is not much hope; but if the physician can, by skillful questioning, bring out a definite history of serious digestive upsets between headaches, something can perhaps be done.

Jaundice. If the patient has had jaundice you will want to find out how definite it was, and how it began. If with pain, you will think of stones; if without pain, you will think, in young persons, of infectious or "catarrhal" jaundice, and in old persons of carcinoma of the head of the pancreas. Most important is the past history. You will want to know whether the patient ever had any indigestion or pain which would suggest the presence of gallstones. If so, you may feel justified in operating. You will want to know whether the jaundice has been constant and whether it has been deepening or fading. Steadily deepening, painless jaundice generally means cancer. Chills and fever will suggest the presence of infection in the common duct. A history of jaundice in other members of the family will suggest the presence of the hereditary type of the disease.

Dietetic habits. You may be helped by finding out how the patient eats and what he eats. Does he bolt his food? does he overeat, or does he have rows with his family at every meal?

Sleep. I find that physicians often forget to ask about sleep, and yet not infrequently it is the most important point in the story. All one has to do with many so-called neurasthenics is to give them several nights of good sleep. It enables them to get a new grip on life; their sense of fatigue diminishes; their threshold for nervous stimuli rises, and most of their symptoms disappear.

The physician must always ask about worries, unhappinesses, family unpleasantness, financial troubles, love affairs, and the other things which bring on insomnia and the neuroses. If he lacks the requisite sympathy and interest and understanding to find out about these things and to talk them over sympathetically with his patients, he cannot expect to have their confidence and loyalty and affection; and without these aids he may find himself quite unable to help them with their physical troubles.

Finally if, after having taken a good history and having studied the patient carefully, the physician cannot make a diagnosis, the best thing for him to do is to sit down, as a consulting physician would do, and take the history all over again. Why? New facts of value will then be brought out, wrong impressions will be corrected and in many cases, the solution of the problem will become apparent.

TWO TYPES OF TOXEMIA IN TOXIC ADENOMA*

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Is toxic adenoma a distinct clinical entity? Much has been said and written concerning this point. Plummer was the first to insist on a definite distinction in classification between exophthalmic goiter and toxic adenoma. He emphasized the difference in onset and clinical course in the two conditions and brought out the fact that exophthalmic goiter has certain symptoms to some degree peculiar and characteristic and that the same is true to a certain extent of toxic adenoma. Other writers, as Crotti, and Allen Graham, claim that both conditions are merely "clinical variations" of a single disease." Graham points out the fact that frequently cases present all the symptoms and signs of exophthalmic goiter and nevertheless have adenoma in the thyroid. Furthermore, he states concerning the pathology which Plummer finds different in both conditions. "In an extensive experience with pathologic conditions of the thyroid we have been unable to detect a single quality of thyroid adenomatous tissue that could be recognized as constantly present in toxic adenoma and constantly absent in exophthalmic goiter and simple endemic goiter."

Graham furthermore discusses the reaction to iodine medication in the two conditions in his attempt to prove the unity of the two types of thyrotoxicosis. He finds "that the reaction to iodine is fundamentally the same in cases of exophthalmic goiter and toxic adenoma." This is not in accord with the opinion of most authorities.

To make his position plain we may include the following quotation. "If exophthalmic goiter and toxic adenoma are two separate and distinct diseases, there might be reason for expecting opposite effects from iodine therapy, especially if exophthalmic goiter is considered an essential dysthyroidism (incomplete saturation of secretion by iodine) and toxic adenoma is considered a pure form of hyper-thyroidism (secretion completely iodized). On the other hand, if exophthalmic goiter and toxic adenoma are different phases, degrees or variations of a single disease—the reaction to iodine should be of the same order in the two forms."

* Read at The Post-Graduate Clinics of The Michigan State Medical Society and The Wayne County Medical Society and The Alumni Association of the Detroit College of Medicine and Surgery, May 16, 1928.

TWO TYPES OF TOXEMIA

It seems to us that the confusion has arisen from the fact that there are two types of toxemia in the class of cases popularly called toxic adenoma. One form of toxemia is that which comes from absorption of degenerated products, the debris from hemorrhages, etc., within degenerated areas in the adenoma itself. This form of toxemia presents symptoms quite similar to those of an anaphylactic reaction due to absorption of foreign protein. The cases in this group tolerate iodine very poorly.

Out of a total of 3,458 cases of toxic adenoma 514 were of this class.

There is however, another and very distinct type of toxemia found in certain cases of toxic adenoma. This type of toxemia presents entirely different symptoms, different course and has a different reaction to iodine; the toxic symptoms of this group are quite similar to those of Graves' disease or exophthalmic goiter. While not benefited as much by iodine as the typical exophthalmic goiter case yet these cases usually respond very favorably to iodine.

These cases are often called secondary Basedow or secondary exophthalmic goiter. Out of our series of 3,458 cases of toxic adenoma 647 were included in this group. Not all cases of toxic adenoma, however, present symptoms exclusively of one type or the other. In this same series of 3,458 cases 865 exhibited a symptom complex suggestive of a combination of these two forms of toxemia. In the majority of these the symptoms due to the absorption of degenerated products, were of long standing, while the symptoms similar to those of Graves' disease and which were suggestive of hyperplasia in the gland were of more recent development.

The remaining 1,432 cases in our toxic adenoma group were of such long standing that the type of toxemia previously present could not be determined definitely. The most pronounced and constant symptoms were the cardio vascular symptoms.

A brief discussion of the two types of toxemia mentioned is in order.

ANAPHYLACTIC TOXEMIA

It is recognized that in a certain number of cases of toxic adenoma there inevitably develops within the gland itself areas of degeneration and disintegration. These areas are at times quite extensive and it is only natural to assume that the absorption of the products of extensive degeneration

must be accompanied by certain symptoms over and above the symptoms of thyrotoxicosis. Our clinical observation has proved this assumption correct and we note in these cases symptoms directly referable to the absorption of protein substances from the broken down tissue. In other words, we note symptoms distinctly suggestive of an anaphylactic reaction. Among these symptoms may be mentioned slightly raised pulse and basal metabolic rate, dermatographia, urticaria, respiratory paroxysms, paroxysmal tachycardia, digestive disturbances, slight jaundice, vomiting and diarrhea, puffy face and swollen eyelids. Tremor, eye findings and excessive nervousness are usually absent. An obvious goiter, weakness, loss of weight, sensitization to various food products, to iodine and other drugs, and cardio vascular disturbances are usually the outstanding features of the case. This type of toxemia although representing a large percentage of the toxic cases has been observed by us only in connection with adenomas in which degeneration had occurred in some portion of the gland. Frequently the complete picture does not develop until evidence of absorption of degeneration products has been present for some time.

EFFECT OF BROKEN DOWN GLANDS

That the symptoms suggestive of anaphylaxis are due to the absorption of protein substance from broken down gland tissue seems to be born out clinically by the facts that:—

1. Degenerated areas are always found in the adenoma after removal.

2. The removal of the adenoma always gave relief.

3. It was found that many of these cases would respond favorably to desensitization by repeated injections of small doses of foreign proteid; the symptoms were aggravated by large doses.

4. The symptoms were intensified by the administration of iodine, strychnia, adrenalin or any other drug that has a tendency to increase sensitization. All the instances of "hyper-thyroidism induced by iodine" that we have seen were in patients that were classified in this anaphylactic group. In all the cases with pre-existing adenoma in which symptoms of toxicity were resultant on the administration of iodine it was found that areas of degeneration had existed in the adenoma and that symptoms suggestive of anaphylaxis formed part of the picture of thyrotoxicosis. In 187 out of the 514 cases in this group the history

reads that "the acute symptoms appeared after administration of iodine." In 146 other cases the history showed that thyrotoxicosis had already been present but had been intensified by the administration of iodine. 152 of the cases in the group developed symptoms of thyrotoxicosis during pregnancy and in 49 cases the thyrotoxicosis developed within three months after delivery. In 19 cases the toxicity appeared to be directly resultant on the injection of various substances into the tumor.

It may be of interest to note that of the 514 cases in the anaphylactic group 112 showed definite intrathoracic projections and 96 others were classed as retrosternal. It may be that undue pressure in these abnormal positions has a tendency to cause degeneration of the adenomatous tissue.

TOXEMIA IN ADENOMA OF THE HYPERPLASTIC VARIETY

Of the 647 cases that presented clinical symptoms suggestive of mild Graves' disease only 47 showed marked exophthalmus; the following symptoms, however, were present in all of them, tachycardia, palpitation, faint tremor, loss of weight, increased appetite, muscular weakness, and moderately increased metabolism.

If adenoma and toxemia are present and co-existent in these cases they must according to present custom be classed as toxic adenomata. The weight of evidence however, seems to indicate that the symptoms are directly attributable to the areas of hyperplasia that were found in every case in some portions of the gland not included in the adenoma.

The writer is of the opinion that in some instances of toxic adenoma, a localized hyperplasia occurs successively in separate areas of the gland, so that the symptoms of different stages of hyperplasia are present from different areas. In such cases, the typical syndrome of Graves' disease is not observed and in the presence of an adenoma the condition must be classed in the general group of toxic adenoma, notwithstanding the fact that the toxic symptoms may be due to hyperplasia. When the symptoms due to the hyperplasia are quite pronounced the case is usually called a secondary Basedow or secondary exophthalmic goiter in contra-distinction to the typical exophthalmic goiter. While the cardinal symptoms are by no means identical with those seen in typical exophthalmic goiter yet the difference is usually only that of degree.

MILD TACHYCARDIA

The tachycardia is often of mild degree and lacks the persistency and intensity of the tachycardia in Graves' disease. It may not be constant and at times may disappear almost completely. It is sometimes in late cases favorably influenced by digitalis. In the early cases the pulse rate is often between 95 and 105, the rhythm is regular and the first sound accentuated.

The cardio-vascular symptoms may not cause much trouble over a considerable period of time; except for some dyspnoea on exertion, dizziness, occasional palpitation, the patient may feel fairly well. Even in the advanced cases, pulse rate rarely or never reaches the degree of tachycardia observed in exophthalmic goiter. It is rarely above 120 to 130 except in paroxysmal attacks. Attacks of palpitation, however, become more frequent and more troublesome and sooner or later arrhythmia develops. Slowly the diastolic pressure falls and the systolic rises, thus, increasing the pulse pressure. The arrhythmia is usually a late symptom. It occurs spasmodically at first, later becoming constant. It is due usually to an auricular fibrillation; auricular fibrillation and auricular flutter are common in the late stages. Heartblock is occasionally seen. It was present in 119 of our cases. As the heart condition becomes worse, oedema supervenes and in a short time may become generalized.

Hypertension is common late in the course of the disease. Blood pressures of about 160 or 170 systolic and 100 diastolic are often found. This may be compared with the characteristic blood pressure for Graves' disease, which rarely runs above 135 or 140 systolic and 65 or 70 diastolic.

The thyroid swelling in toxic adenoma is usually large and irregular. It lacks the symmetry, pulsation, and compressibility of the thyroid in Graves' disease. Usually no thrill or bruit is audible. The goiter has usually been present over a long period of time.

Tremor is frequently absent. When present it is usually more coarse than the delicate tremor seen in Graves' disease. The mental symptoms, as compared with those seen in Graves' disease, are mild, and usually are not of much consequence. The persistent insomnia and the psychosis seen in Graves' disease are very rare indeed.

The eye findings are frequently absent and when they occur it is usually late in the course of the disease but exophthalmos

and eye findings occasionally develop in the hyperplastic type of toxic adenoma.

GASTRO-INTESTINAL

Constipation is often present. Loss of appetite is frequently complained of. The acute gastro-intestinal attacks noted in Graves' disease are rarely or never seen in the true case of toxic adenoma. Frequently a normal amount of food is taken and the weight remains normal over a prolonged period of time. As the disease progresses and the toxicity increases, weight is lost but it is a gradual loss and the terrifically acute wasting sometimes noted in Graves' disease is practically never noted.

Taken on the average the basal metabolic rate is considerably lower in hyperplastic toxic adenoma than it is in Graves' disease. The patient may be very ill with marked symptoms of toxemia and severe cardiovascular disturbance with slight rise in the basal metabolism rate. It is also noted that a rise in the metabolic rate in toxic adenoma is not always associated with the same degree of toxicity that a similar rise in Graves' disease would imply. It is difficult to give an accurate idea of the curve of basal metabolism in these cases of toxic adenoma. In the mildly toxic cases, in the early stages, there may be only slight elevation of the metabolic rate. In other instances the increase in the metabolic rate is pronounced throughout the whole course of the disease. The exceedingly high rate seen in some cases of exophthalmic goiter is rarely seen in toxic adenoma. The onset of the disease is insidious and it is the exception that an abrupt flare-up of toxicity is noted.

In conclusion we wish to state that clinical observation in a large group of cases over a long period of time has clearly convinced us that two distinct types of toxemia may be present in toxic adenomata, that these two types of toxemia may exist separately or in combination and that the treatment of these two types varies in some important respects.

The type of toxemia present will clearly indicate the mode of treatment. Anaphylactic toxemia contra-indicates iodine, toxicity due to the hyperplastic type of toxic adenoma indicates iodine. A clearer conception of these two types of toxicity will clear up much of the confusion that exists regarding the use of iodine in toxic adenomata; it will enable the surgeon to administer iodine to the case which needs it badly or even urgently and to withhold iodine from the patient for whom it is contra-indicated.

HIGH FORCEPS: UNDER STRICT INDICATION TOGETHER WITH REMARKS OF A NON-ACADEMIC NATURE ON WHEN TO DO CAESAREAN SECTION FOR PELVIC INDICATION*

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This title should raise bristles on a modern obstetrician's back. High forceps is in disrepute and it is the obstetrical fashion to decry it. A distinguished specialist says annually in meeting "high forceps—brutal, long since abandoned—never done by one of us, *I hope*." We venture to suggest that such a statement is rubbish. We venture the belief that high forceps is, was and always will be a very useful and necessary operation providing it is done on proper cases and with proper technique. We think that poor reported statistics are due to the facts that both these provisions have not been followed. We believe that truly good forceps operators are scarce, yet we believe that any man who will make the effort can become one.

We are not before you to advocate delivering all women with forceps at full dilatation, nor do we recommend pushing up the usually engaged primiparous head and delivering it as a high forceps. Yet when confronted with the same proposition with respect to version we feel that if we followed the same requirement for that indication, namely, that the head can be pushed to the pelvic floor, we would prefer to take our chances with forceps and expect equally good results. Each man to his own weapon.

However, such debate need not concern us, since we are equally conservative as to both forceps and version—and have yet to see any method of delivery so satisfactory in the long run as that designed by nature, when it works. By the same token we are enthusiastic about giving it time to work.

WHEN TO DO A CAESAREAN SECTION

The question of sensible indication for high forceps is ultimately connected with the practical question of when to do a Caesarean section for pelvic disproportion. Observation in my own state and

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city leads me to the unpleasant conviction that men with really rational knowledge of when to do a Caesarean section for pelvic disproportion are as scarce as good forceps operators. I once said in the heyday of youth that the indication for Caesarean section in Massachusetts was the failure of the baby to arrive in time to suit everybody involved; and a checkup by others, notably my departmental chief, demonstrated that this was about the truth; and that in addition many were done as operations of last resort—among more patient people.

It is as important to know when not to do a Caesarean section as when to do one. This for the reason that the more Caesarean sections are done for no real indication, the more mothers die. Caesarean section carries with it an inevitable mortality even when done at time of election on cases that do not need it. No figures yet shown of classical, low, or so-called trans or extra peritoneal Caesarean section have demonstrated that it is as safe a way for a normal woman with a normal pelvis to have a child as by the natural passages. Therefore more Caesareans unindicated higher maternal mortality. Hence, every effort should be made to study out each patient with a view to obtaining as many deliveries through the natural passages as possible with a reasonable degree of safety to the child and to the mother's soft parts.

We may say in advance that we have pursued the course here to be outlined with satisfaction for a good many years. We have yet to lose a mother in private practice (in the uncomplicated case, i. e., toxemia, placenta previa, etc.), on delivery from below, though we have lost several Caesarean sections. We have lost two babies only from high forceps done as a result of following this routine. Both were errors not to be repeated with maturer judgment. We have seen no cerebral hemorrhage, (other than in the two dead babies), and no permanent paralysis in these cases, though we have seen both after difficult versions, and the former after all sorts of deliveries. We have followed not a few of the children for five to ten years and have seen no mental inferiority in any. To those of you familiar with our expressed dissatisfaction with our results in other conditions of pregnancy, notably, toxemia, placenta previa, and premature separation, these claims will, perhaps, not seem extravagant, but will be accepted as fact. Needless to say, the number of such cases is not large,

since every effort is made to avoid them.

Little of what we are about to consider is original. It is all in the books; certainly in Newell's monograph, "Caesarean Section" (D. Appleton & Co., 1924). We have simplified it for our own practical use and tried to see the pelvis, labor, and prospective operating from below together and in advance of delivery in each case. Perhaps we have tried to see it more as a whole than the text books have it. Perhaps we have tried to a greater extent to have in mind the relation of each factor to each other factor. In a few points we disagree with the accepted text book teaching.

MECHANICAL FACTORS

The mechanical factors concerned in the successful termination of a given pregnancy are (1) the size of the child's head in relation to its mother's pelvis. (2) The character and accomplishments of the given labor.

The first factor is definitely estimable save for the matter of moulding. The second factor is one of which we can do no more than make an intelligent guess.

You are familiar with the rules laid down in the books to predetermine the mouldability of the head. Personally I am not keen enough to feel that they are of practical value to me and pay little attention to relative mouldability, assuming, rather, a certain amount in all my calculations. The one exception to this statement is the definite "solid ivory" head which is occasionally encountered. In that I assume no moulding. In this connection it must be borne in mind that moulding is principally a second stage procedure, and if we count on moulding in our estimate, our estimate as well must preclude operative interference prior to a reasonably prolonged second stage. There must be no "prophylactic this or that" if salvation depends on moulding a fetal head. This is a cardinal principle sometimes overlooked.

Thus disposing for the moment of mouldability of the fetal head, we may proceed as briefly as possible with the relation of the child's head to its mother's pelvis.

PREGNANCY—THREE GROUPS

By ordinary methods of examination and the use of Muller's method of head impression with or without anesthesia, all pregnant women fall into three groups. Group (1) those in which the head is or can be brought into the pelvis, i. e., anteriorly as low as the lower border of the symphysis and in apposition to it, posteri-

orally as low or nearly as low as a line drawn from one ischial spine to the other. Group (2) those in which the head is not and cannot be brought into the pelvis *and definitely overrides*. Group (3) those in which the head cannot be brought as low as the landmarks described under group (1) but which show no demonstrable overriding or only a little. Group (3) constitutes the border line group and is principally the subject of discussion in this paper. The technique of determining surely the level of the head in the pelvis, and still more the technique of Muller's impression method and the determination of overriding are still entirely too unfamiliar to practitioners of obstetrics in my part of the country; especially since on an accurate conception of these things depends the number of Caesarean sections done for pelvic disproportion, and ultimately the number of deaths following Caesarean section, of which there were fifty-four in 1927 in Massachusetts.

Digressing for the moment, let us consider factor number two as stated above, that is, the character and accomplishments of the given labor. As stated also, this is only guessable. In this connection this fact, not usually emphasized, should be borne in mind. Labor failure may manifest itself in one of two ways, either by poor pains with little result in effacement of the cervix, or again, and far less often, by pains of excellent quality, but with poor results in cervical dilatation. Certain types of cervixes, I believe, not profitable to speculate on here, are prone to give rise to this second type of labor failure. For more authoritative substantiation, and better phrasing than I can attain, of the point I am about to bring out I may quote Newell's monograph "Caesarean Section." He says, "In the majority of border line cases a few hours trial of labor will give a strong hint as to the probable outcome." Further, "Of course, the result of labor cannot be accurately predicted in a certain proportion of cases until the patient has had a true test of labor, i. e., two hours in the second stage, but a few hours of labor will determine whether the case is likely to progress to a favorable conclusion, except in so far as the ultimate moulding of the head is concerned."

Thus we have considered the two factors. When is the time to make the complete examination which will give us the most information on which to guide our future conduct of the case? In the event of early rupture of the membranes, this

examination should be made as soon as the patient is hospitalized, since delay with ruptured membranes increases the risk of Caesarean section. Barring this accident the most favorable time is six to eight hours after the onset of labor. This for the following reasons: First, the probable character of the labor may be estimated. In this connection a chart of the pains—interval and length, often shows one of two phenomena, either, broadly speaking, regular diminishing intervals with regular progressing length pains or irregular intervals with irregular length pains. Experience has shown that the former usually means a good subsequent labor, the later a less good subsequent labor. Second, examination at this time allows us to check the amount of dilatation against the labor chart. Experience teaches us what dilatation to expect from a labor chart of the first 6-8 hours. Experience shows further that if this expected dilatation is not obtained, we may look usually for a prolonged first stage and too often ultimate failure of the cervix to be completely effaced, with results which I shall later stress. Third, the cervix is usually taken up at this time and experience shows that it is easier to determine by the Muller method the "potential" level of the head after this has been accomplished.

Two questions immediately are raised and may be answered here. Six to eight hours of first stage labor with unruptured membranes does not, we believe, increase the risk of Caesarean section: The Muller method may be applied with rectal examination instead of vaginal, though never quite so accurately, we think. My own results in 180 personally done low classical sections, however, leads me to have no fear of a single carefully made vaginal examination six to eight hours after labor has begun. Also, of course, many cases present either so overriding a head to palpation before labor starts that this examination can well be made in advance, or so low a one to the ordinary pre-labor rectal that this examination is never indicated.

Returning from this digression to our groups. Let us consider, for purposes of elimination, Group 2 first. In these definite overriding is predetermined by the accurate Muller method. In the light of Caesarean mortality in good hands it would seem (in white women, at least,) that these patients should be subjected to elective abdominal section within the first few hours of labor. It is the contention of

some of the advocates of trans and extra-peritoneal methods—that these methods make Caesarean section so safe from the standpoint of infection that they may be done after many hours of labor, or after many hours of ruptured membranes, or after repeated vaginals or even after other intra vaginal manipulations, and further, that these methods do away with the necessity for accurate determination of the relation of the head to the pelvis. They maintain that all that is necessary is to permit the patient to have as many hours of labor as one wishes and then on failure to deliver the baby, she may be safely sectioned. They maintain that in this way many women who would otherwise be subjected to section relatively early will deliver themselves or come to low forceps and that thereby many less Caesareans will be performed. These things may prove to be true, but on present knowledge we deplore the tendency of this doctrine to take hold for several reasons. Three which may be mentioned here are, first, that we have not that much faith in the safety of the trans and extra-peritoneal sections over the low intra-peritoneal section, and we feel that with time and accumulated data about the same contraindications must govern the one as the other. We fear that any technique advertised as permitting further laxity in respect to the prescribed contraindications to Caesarean section will but end with a higher maternal mortality; since we observe in practice so frequent disregard of the rational contraindications now. This in spite of the fact that we think Phaneuf's modification of the Beck and Kerr operations technically the best type of Caesarean section yet devised. The second reason is that if we abolish Muller's impression method and do late extra-peritoneal sections we will do them for first stage failure on patients with normal pelvic relations, a procedure seldom, though occasionally, justifiable. Third, an occasional baby may be lost from prolonged test of labor even before a hasty section gets it out of the uterus.

Group 1—those cases in which the head is, or can be put to full engagement. This group should be almost invariably delivered from below. It is in this group that I dissent from the accepted text book teaching with regard to the funnel pelvis and the narrow outlet. I would not care to publicly disagree with the academic figures given for the incidence of these conditions, though I have my own opinion

on that, but I make no hesitation in stating my belief that as a cause of severe dystocia (in white women) the narrow outlet and the funnel pelvis are almost, *but not absolutely*, negligible. Of 180 personal Caesareans, I have done one for contracted outlet, and on this woman had previously delivered a five pound baby with low forceps. Conversely I have not been sorry that I did not section any patient on this account. Very occasionally a short posterior sagittal and a narrow transverse diameter of the outlet in the same patient may make section wise. A more frequent reason for disaster to the soft parts and sometimes to the baby, is a failure to recognize a flattened sacrum which hinders rotation, especially in posterior positions. Trouble is avoided in these cases by high rotation and it is in these cases sometimes that the technique of Bill of Cleveland is of especial value.

We now come to Group (3), cases in which the biparietal diameter of the head is not, and cannot be impressed, through the inlet, but with little or no overriding. These border line cases are sometimes best delivered from below, sometimes by section, depending on the following considerations. The successful outcome of such a case delivered from below depends on one of two things. A labor of accomplishment with some moulding, or failing this a correctly done operative procedure from below, not infrequently a high forceps. When the indicated operation is for a high forceps its success in this border line pelvis depends on the operator's ability to get the blades over the ears at the initial application since anything less favorable than the smallest diameter of the head pulled through an inlet already tight must result in an unreasonable number of dead babies from torn falx and tentorium, traumatic cerebral hemorrhage, in short. This, not only because of the relatively large diameter of the head for the given pelvis, but because the oblique application of the blades has the same twisting traction effect as have the hands of a boy on an apple which he splits by rotating one half one way, the other the opposite. The operator's success in this application depends not only on his experience and skill, but on three other conditions usually considered in general, but of far greater importance in connection with the application of forceps in this border line group and not usually so stressed. These three conditions are (1) the persistence of a cervical ring. (2) Excessive depth of the

symphysis (that is to say, its verticle dimension). (3) A narrow arch and small outlet. Experience has shown that oblique applications are more common, even in the hands of skilled operators, when any one of these conditions exist, or still more when they exist in combination. While it is true that a low head of an eight pound baby may be brought through an outlet too small to take the fist with no more damage to the mother than an episiotomy wound, it is likewise true that to apply forceps over the ears to a high head in the presence of a persistent cervical ring with a similar outlet is often extremely difficult. So also the difficulty of applying correctly the anterior blade high in the presence of a deep symphysis is not inconsiderable. If then in the border line group the labor study of 6-8 hours, if favorable, and the outlet and the symphysis favorable we should deliver from below; if both are against us we should section. If the one is favorable, the other unfavorable, the decision must be left to individual judgment, with possible resort *occasionally* to a late extra peritoneal section if one has faith in it, or the occasional dead baby till judgment becomes better. Obviously the earlier man in obstetrics will do more Caesareans under this indication, the more experienced man fewer. Hence, to reiterate, the more experienced man's maternal mortality will be lower and his fetal mortality as low or nearly as low. I have a feeling that we are living in an obstetrical age too afraid of losing a baby, and not sufficiently afraid of losing a mother. It should always be borne in mind in every case that once we commit ourselves to a Caesarean section and start it even under strict indication, the outcome is pretty much beyond our control and seems to rest chiefly in luck. A maternal mortality in Caesarean section of 9 per cent in Massachusetts a few years ago perhaps over emphasizes this statement.

Let us return to the original thesis of high forceps. I have abandoned high forceps for certain indications in which I formerly did them. Version sometimes seems the operation of choice in multipara with normal pelvic relations where operation is forced by failure of the cervix to dilate. Sometimes I think less harm is done the cervix, and that there is less stretching down of the ligaments by version. I often put on forceps in these cases and with gentle traction observe whether or not the anterior blade seems about to split the cervix and base my choice of operation on

this observation. Again in a definitely flat pelvis, either in the border line or in a pelvis with normal relations, I resort quickly to version unless the first forceps application is immediately satisfactory. Again, the discovery of a low lying cord leads me to version, without attempts at forceps.

It may be seen, then, that there is left a narrow but none the less definite field for high forceps. Ruled out by Muller's method of impression, no overriding head is ever, or ever should be subjected to high forceps. A head presentation with lower segment ring formation or with a tight uterus, if it can be delivered from below, should always be delivered with forceps by special technique, and this is frequently a high forceps. Failure to observe this rule, the resort to version in these cases supplies us with a steady, if small trickle of traumatically ruptured uteri. The *justo minor* pelvis, as opposed to the flat, but without pelvic disproportion with first stage failure and a head which has not descended into the pelvis itself should be delivered by high forceps. And lastly the border line case (Group 3) in which the decision to deliver from below has been made and labor fails in the first stage or early second, in the *justo minor* (as opposed to the flat pelvis) *must* be delivered by high forceps requiring a high degree of obstetrical skill. It is in this group that version is absolutely contraindicated. Crothers' excellent work has shown this. My interpretation of his work is that the greatest of all obstetrical tragedies, the child destined to live, dead from the neck down, almost invariably results from a version done on this type of case, or sometimes an unskilled version done in any case. Such observation as I have made on the production of this lesion leads me to conclude that this interpretation is correct. Better the occasional massive hemorrhage from the torn falx or tentorium than the small cord injury leading to massive paralysis. Not only is the baby thus put in jeopardy, but so is the mother. In the Massachusetts mortality statistics for 1927 we have listed twenty-six cases with causes of death given "after difficult operative delivery." This is approximately 5 per cent of all maternal deaths for the year. Of these twenty-six, ten are set down by the men who signed the certificate as "after version." Doubtless some of the others were too, though not so stated.

Teaching the importance of perfection in obstetrical technique in detail and the

technique, both of forceps and of version is our scholastic duty. Too often men previously trained in surgery are graduated from obstetrical hospitals, but mediocre obstetrical operators, though well trained enough in abdominal surgery, all too ready on this account to overdo abdominal surgery, and forced to perfect their obstetrical technique, if ever, at the expense of early patients.

In conclusion: We believe it is not true that high forceps is an obsolete operation. We believe it has a definite, if narrow field. We believe perfection in its technique should be sought by all practitioners of obstetrics. This so that on the one hand version will not be done when contra-indicated, because the operator is not skilled in forceps, and on the other that Caesarean section may be kept within its strict limits.

LIVER FUNCTION

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The liver is the largest and one of the most important glands of the body. Its double blood supply and production of internal and external secretions has made it a continuous source of interest to the physiologist. There are even yet many problems concerning its function. Its activity is very necessary for health and it is a well known fact that if it be removed life becomes extinct in a few hours. For centuries the liver has been considered the king of organs.

It is a well established fact that the liver detoxicates the poisons taken into the body, such as arsenic, phosphorous, chloroform, and other products of a toxic nature formed by metabolic process in the body.

For a considerable time we have had accurate knowledge relative to the gross anatomy dividing the liver into lobes and giving detailed description of the circulation. The histology also has been worked out telling of the lobules, inter-lobular and intra-lobular vessels, bile ducts, the reticulo-endothelial cells, and supporting connective tissue.

Last but not least in this role is physiology which has to do primarily with the function of the organ. The untiring efforts of recent investigators have brought to us new chapters in the physiology of the liver. Here we may enumerate some of the factors that have been definitely

worked out and proven during the last few years.

IMPORTANT LIVER FUNCTIONS

1. Mann has demonstrated that the removal of the liver results in death in from two to eight hours during which time the animal presents a group of symptoms which are practically always the same¹.

2. The formation of urea is dependent upon liver activity².

3. The commonly accepted belief is that bile pigment is a product of destroyed blood cells, that the transformation occurs in the Kupffer cells of the liver and other portions of the reticulo-endothelial system and that the hepatic cells serve the purpose of excretory cells³.

4. Formation and storage of glycogen in the liver⁴.

5. Destruction of uric acid in the liver⁵.

6. Secretion of bile.

7. Important regulation of metabolism assisting in the transformation, assimilation and distribution of food stuffs.

8. Detoxicating function.

THE ANATOMICAL AND PHYSICAL UNIT

These functions depend very largely upon the activity of the liver cell which constitutes the anatomical and physical unit of the organ. The liver cells are quite uniform in structure throughout the entire organ. The function of the liver cells naturally falls into two divisions, one treating of the formation and physiological significance of bile, the other the changes which take place in the blood gathered from the entire intestinal tract, laden with food elements, digestive ferments and possibly unknown hormones, which is passed through the liver by the portal circulation resulting in definite metabolic processes. Glycogen is one of its principal products, being stored in the liver cells until it is needed for distribution in the body to keep up the level of blood sugar. Like many other organs in the body, the liver possesses a very large reserve capacity. Experimentally seventy per cent of the organ has been removed without producing apparent effect upon the general condition of the animal. It has also been found that the hepatic tissue is capable of undergoing compensatory hypertrophy to a very large degree¹.

Much research has been made in recent years to increase our knowledge of the anatomy and histology of the liver. At the same time there has been much work done by many investigators relative to the test-

ing of the function of the liver. Any tests to be of value should be based on physiological facts, or depend upon some specific property possessed by the organ in question. This work has been approached from several different angles and diversified results have been obtained, some satisfactory and some unsatisfactory.

DYE TEST

In 1909 Abel and Rowntree determined by pharmacologic studies that phenoltetrachlorophthalein was excreted almost entirely by the liver and that it was non-toxic when injected intravenously. This dye was found to be an odorless crystalline substance, insoluble in water and forming deeply colored hydrolyzable salts with alkalies. The dye was first prepared by Erndorph and Black. Rowntree⁶ and his associates advocated the use of phenoltetrachlorophthalein to test the functional capacity of the liver. Tests were made at this time by collecting stools and estimating the amount of dye excreted in the stool. In 1916 McNeil⁷ modified the Rowntree method by inserting the duodenal tube and aspirating the bile. The method of collecting the dye in the stools was subject to sources of error and required a large amount of work, for which reason it was soon abandoned. The duodenal tube method has obvious clinical limitations because of the difficulty in passing the tube and the impossibility of collecting all the bile, and soon fell into disrepute. The problem was then approached from another angle in 1922 by Rosenthal⁸ who devised the method of investigating the liver by injecting the dye into the blood stream. All previous tests suggested qualitative disturbance only, but the dye test as suggested by Rosenthal gives a quantitative idea as to the amount of liver involvement. A few disadvantages had been noted in the employment of the phenoltetrachlorophthalein. The dose required was rather large, irritation of the vein was frequent and occasionally thrombosis and systemic reactions occurred. Because of these objections Rosenthal set out to make a study of the large group of phthalein compounds with the result that a new dye, phenoltrabromophthalein sodium sulphonate, was found which seemed to be ideal for the testing of liver function. It is excreted in the bile of a normal rabbit to the extent of 85 per cent in one hour after its injection. Under normal conditions it is rapidly removed from the blood stream by the liver cells, since, when the liver is removed, it

remains *in toto* during the early period following injection. These are striking advantages over the former dye which, when injected into the rabbit under like conditions, is excreted in the bile to the extent of only 5 to 10 per cent in one hour and which never reaches a high concentration.

Bromsulphalein appears only in traces in the urine and sometimes not at all⁹. This dye has the following advantages: First, the dose is small, being only two milligrams per kilogram of body weight. Second, even though injected accidentally outside the vein there is little irritation and no thrombosis. Third, there is no constitutional reaction.

The simplicity of Rosenthal's method and the slight danger and inconvenience to the patient led us to give further study to the subject. To date the test has been applied to three hundred individuals at the same time estimating the urobilinogen in the urine, the glucuronic acid in the urine, also doing the Van den Bergh, direct and indirect, as well as the icterus index on the blood serum.

According to Shattuck¹⁰, normally from three to five per cent of the dye is present in the blood serum at the end of fifteen minutes and none at the end of one hour. In our estimation we adopted as our standard zero to ten per cent at the fifteen minute period and zero at the thirty minute period. Some objection has been found by clinicians to the bromsulphalein test because it necessitates two vein punctures instead of one. In our experience this has not been particularly objectionable to the patient and no serious complications have arisen in the examination of three hundred cases.

ICTERUS INDEX

The icterus index is a test that has met with favorable mention in recent years. The results depend largely upon the behavior of the bile pigments. The formation of bile pigment is yet a debatable question, but there seems to be a preponderance of evidence that it is very largely an extra-hepatic product and formed from the hemoglobin of the blood. Physiologists recognize that blood is continually being destroyed and pigment liberated. This being true, there must be a bilirubin constant in the blood serum¹¹. The normal range has been placed at approximately one part of bilirubin to 500,000 to 600,000 parts of serum.

When this concentration of pigment has increased to approximately one part in 60,000, the tissue cells reach the point of

saturation and macroscopical jaundice appears. The range of bilirubinemia between the normal and the development of jaundice is known as "latent jaundice."

It becomes at once evident that the value of the test lies in its ability to estimate the bilirubin present in the blood stream, particularly during the period of latent jaundice. Expressed in figures, Bernheim¹² states that the normal range is between *four and six* and latent jaundice between *six and fifteen*.

Any pathological process which would have a tendency to interfere with the normal hemolytic process of the body, such as anemia, hemolytic jaundice, malaria, etc., would undoubtedly increase the serum pigment quantitatively.

The main objection to the test is that the color of the serum is so easily interfered with, for instance, by the slightest degree of hemolysis, or other colored substances in the blood. We have observed, in connection with the Graham test for gall bladder disease, that the dye used (iso-iodoikon) causes a deepening of the color of the serum, giving too high an icterus index.

VAN DEN BERGH'S TEST FOR BILIRUBINEMIA

In this test for bilirubinemia there are two possible reactions, a direct and indirect. Theoretically, they are supposed to differentiate between obstructive and non-obstructive jaundice, the reaction for the latter being due to injury directly to the liver cells or from jaundice extra-hepatic in origin.

In cases of obstructive jaundice the color of the serum changes promptly from yellow to a pink or violet and indicates a positive direct reaction. The indirect reaction is obtained in obstructive, non-obstructive and latent jaundice, and is a measure of the total bilirubin (both free and combined) in the blood. The results in the indirect reaction are due to the fact that the bile pigment in the blood is united with some form of protein and requires the presence of alcohol to break it up, while in the obstructive jaundice the bile pigment is found in the free state. A probable explanation of how the bilirubin is liberated from conjugation with the protein is given by Hall¹³. He states that in obstructive jaundice due to the stasis there is an increase in *bile salts* in the blood. These bile salts act as does alcohol in liberating the bilirubin so that it gives an immediate color reaction.

We have interpreted zero to a trace as

dice, and from one plus up, clinical icterus.

The presence of the serum of this dye (iso-iodoikon) interferes with the determination of the direct Van den Bergh test for bilirubin creating a false positive, and serum collected half an hour following the injection may give a one plus reaction. The serum collected one hour following the injection may give a two or three plus reaction.

GLUCURONIC ACID LIVER FUNCTION TEST

This test makes use of the Tollens and Rorive reaction, with Naphtho-Resorcin. It has been advocated by Professor H. Roger, Dean of the Paris School of Medicine, for many years.

Of the many functions of the liver, that of detoxification is one of its best recognized and most important. In response to the toxins brought to the liver by the normal, a trace to one plus as latent jaundice, it converts the glycogen into glucuronic acid and then conjugates or binds this acid with the toxin, thereby forming a compound of much decreased toxicity, which is then eliminated through the kidney without injury. Thus, as these toxins are always formed more or less, we find the conjugate glucuronates *present* in normal urine.

If a sample of urine shows an absence of the glucuronates, then the patient is given an evening meal consisting chiefly of starchy foods, sugar and milk. Also as a test material that will combine with glucuronic acid, one-half gram of camphor in a capsule is used. The urine is then saved for twelve hours and tested for glucuronic acid. If still found absent, it indicates failure of this function of the liver.

UROBILINEN

There has been, in the past, a lack of agreement as to the origin of urobilinogen. But in the more recent researches of several workers there seems to be more and more agreement as to its enterogenous origin, as stated by Wallace and Diamond⁴. Bilirubin, entering the intestines, undergoes gradual changes, and eventually in the large intestine, by means of bacterial decomposition, becomes transformed into urobilinogen. The urobilinogen thus formed is mainly eliminated in the feces. Some of it undergoes intestinal absorption and is carried to the liver, there to undergo further changes; part of it, however, is eliminated in the urine unchanged.

It is this latter portion which constitutes the normal urobilinogen of the urine.

TYPICAL RESULTS SELECTED FROM 300 CASES

Case No.	Bromsulphalein % retention at :			(dir.	Van den Bergh	ind.)	Icterus Color Index	Urobi- linogen	Gluc- uronic Acid	
	5 min.	15 min.	30 min.							
185-161	35	tr.	0	0		0		1	+	Normal
184-209	45	0	0	0		0		5	+	Normal
186-006	28	0	0	0		0	3	1	+	Normal
184-515	60	tr.	0	0		0	Norm.	1		Normal
186-265	23	tr.	0	0		0	Norm.	1	0	Normal
186-583		0	0	0		0	Norm.	1	+	Slight disturbance
173-264		7	0	0		+	Norm.	10	+	Slight disturbance
187-316		10	0	0		tr.	Norm.	10	+	Slight disturbance
187-698		5	tr.	0		0	6	1	+	Slight disturbance
186-592		12	tr.	0		0	Norm.	15	+	Slight disturbance
187-987	35	10	0	0		+	Norm.	10	+	Moderate disturbance
186-092	50	22	5	0		+	6	30	+	Moderate disturbance
173-397		30	15	+		++	Norm.	1	?	Moderate disturbance
178-205		15	8	+		++	+	1	+	Moderate disturbance
179-414	70	40	10	0		++		5	?	Moderate disturbance
184-806	80		70					150	0	Severe disturbance
183-762	85	40	25	0		tr.	14	20	+	Severe disturbance
186-286	67	50	40	++	++	++	17.1	1	?	Severe disturbance
187-465		67	48	+		++	17.1	4	+	Severe disturbance
187-857		55	35	++		++	8	1	+	Severe disturbance

Then, if the function of the liver which transforms urobilinogen is interfered with or lost, the urobilinogen passes unchanged through the liver and appears in increased amounts in the urine.

We have used Wallace and Diamond's method, the figures expressing the greatest dilution of the urine in which the pink color resulting from the reaction of the urobilinogen and Ehrlich's aldehyde reagent is present.

The table, for convenience sake, has been divided into four groups. Group No. 1 represents five cases in good health. It will be noted that all the findings are within the normal limits. Group No. 2 represents five individuals in whom, according to history and other findings, pathology would not be suspected, but it will be noted that there is just a slight deviation from the normal. Group No. 3 represents another class in whom there is considerable clinical evidence of pathology. Here it will be noted that there is more or less retention of dye. The indirect Van den Bergh, Icterus Index, and Urobilinogen show a more marked deviation from the normal. Group No. 4 represents another class in which there was definite known pathology. It will be noted here that the retention of dye is much more marked and other tests in the series represent a higher percentage of positive findings. These groups have been selected from a series of three hundred cases and are fairly representative of findings.

As a result of our study in three hundred cases it is our opinion that a diagnosis must be reached by properly evaluating the results of a group of tests and one's observations rather than by relying on any single test.

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A BRIEF SURVEY OF THORACIC SURGERY*

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Widespread interest in the progress of thoracic surgery is my incentive for presenting these notes dealing with the pres-

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ent status and new developments of the subject.

More prompt recognition than is usual at present of the proper time for surgical intervention in empyema, pulmonary tuberculosis, bronchiectasis, lung abscess, thoracic trauma and open pneumothorax, cancer, benign stricture and diverticulum of the oesophagus and malignant and non-malignant tumors of the mediastinum, lung and chest wall would be rewarded by a partial reversal of the present grave prognosis in these diseases.

A sound, although not necessarily an elaborate, knowledge of thoracic anatomy, physiology and pathology is especially important for the making of accurate diagnoses of thoracic lesions and for determining upon rational methods of treatment. Without a mental picture of the true pathologic nature of chronic pulmonary suppuration, treatment can be little better than empiric. Without knowledge of the normal lower limits of the pleural cavity, drainage of empyemic fluid is more likely than not to be faulty and ineffective. Without understanding the physiologic principles of normal negative intrathoracic pressure, the effects of an open pneumothorax on the heart and respiration cannot be intelligently combatted.

The belief is widespread that thoracic diagnosis largely depends on highly developed proficiency in eliciting minute physical signs. It would be far nearer the truth to say that diagnosis depends rather on a common sense interpretation of such easily determined signs as displacement of the heart; dullness, resonance or tympany in the lung fields; absent, decreased, increased or perverted breath sounds; increased or decreased tactile and vocal fremitus; and the presence or absence of rales.

A good physical examination, a careful history and an expertly interpreted X-ray examination are three tools that should be used together, and the constant temptation to rely too absolutely on the X-ray, be avoided. The value of the X-ray has recently been greatly enhanced by lining the bronchial tree with lipiodol, an oil that is opaque to the rays and which may be injected into the lung through the mouth by a relatively simple technique. Further diagnostic and therapeutic aids occasionally of great value in certain thoracic conditions are bronchoscopy, oesophagoscopy and intrapleural thoracoscopy.

EMPHYEMA

Probably the chief reason for the gravity of acute empyema is that it is so frequently diagnosed too late. Toward the end of a pneumonia increase in toxicity, dyspnoea, pulse and respiratory rates, or failure of these to improve, should immediately arouse suspicion of empyema rather than of delayed resolution. A small or a large area of dullness and diminished breath sounds, with Skodaic resonance or tympany, rales and increased breath sounds and fremitus above this area should be the cue for the introduction of a diagnostic needle into the middle of the dull area. Somewhat similar signs present in hepatic or subhepatic abscess or may be caused by paresis or paralysis of one side of the diaphragm, which not rarely occurs in some acute intrathoracic diseases. Interest has recently been aroused by "massive collapse of the lung" or acute atelectasis which occurs after surgical operations, particularly those that restrict free respiratory and coughing movements because of pain, and which presents somewhat the clinical picture of pneumonia and the physical signs of empyema, with the exception that the heart is pulled toward the dull side in atelectasis, whereas it is pushed in the opposite direction by empyema. The condition should be treated by having the patient lie part of the time with the affected side uppermost, take deep breaths at intervals and, by coughing, attempt to dislodge the tenacious mucous that is occluding one or more bronchi. If this fails, aspiration of the mucus through a bronchoscope within twenty-four or forty-eight hours seems to be proving specifically effective in curing the condition and in preventing progression to pneumonia.

Rib resection for open drainage of early acute empyema has probably killed as many as it has saved. It allows atmospheric air pressure to rush into one whole pleural cavity which has not yet had time to wall off the empyemic abscess with adhesions. Similarly the mediastinum is not yet fixed by inflammatory exudate and it swings from side to side with each inspiration and expiration and neither lung is able to breathe efficiently. If the vital capacity has already been greatly lowered by the pneumonia the patient is likely soon to die. Until adhesions form, therefore, prompt and repeated needle aspirations of the empyemic fluid or, preferably, the airtight intercostal introduction through a cannula of a drainage tube and a smaller

tube for frequent antiseptic irrigations, is the only proper treatment. In children this usually suffices; in adults secondary rib resection is commonly necessary. So that airtight drainage may be maintained as long as possible it is important that the skin and extracostal muscles be pushed upward before introducing the cannula or urethral endoscope, so that when they return to their normal position the drainage tube will pass obliquely through the chest wall. This tends to prevent leakage around the tube.

The principal avoidable cause of acute empyema becoming chronic is improper drainage, which includes drainage that is performed too early, too late, for too short a period, and drainage that is not dependent or is attempted with too small a tube, or without the introduction of a second tube for antiseptic irrigations. Drainage tubes should never be removed until the intrathoracic cavity is entirely obliterated. Infraction of this rule almost invariably results in recurrence of the empyema and necessity for reoperation. Other causes of chronicity are imperfectly drained secondary pockets; the presence of foreign bodies, such as a lost drainage tube, in the pleural cavity; osteomyelitis of the ribs; continued reinfection of the cavity by way of a bronchopleural fistula or from a neighboring suppurating focus; tuberculous or actinomycotic infection of the cavity walls. Incidentally, a tuberculous empyema that is not secondarily infected with pyogenic organisms, no matter how ugly the aspirated pus, should never be drained. One or more needle aspirations may be necessary to control symptoms of pressure on the heart and lung. Diagnosis of the tuberculous nature of some mixed infected empyemata remains unmade until tubercles are discovered in a specimen of parietal pleura routinely removed for pathologic examination at the time of establishing open drainage for pyogenic infection of the cavity.

Prolonged adequate drainage and antiseptic irrigations of a chronic cavity that has been inadequately drained results, in a large majority of cases, in a tremendous decrease in the size of the cavity or its complete disappearance. Those cavities that fail to close by this means must be treated radically because the scar on the lung and beneath the ribs that constitutes the walls of the empyema is now too rigid to permit the lung to expand to meet the chest wall or the chest wall and ribs to fall in to reach the lung. Without com-

plete obliteration of the cavity suppuration will continue interminably.

Two types of operation are available for chronic empyema. One peels away from the visceral pleura the scar that is binding down the collapsed lung, thereby allowing it to expand and fill the cavity. The other removes the ribs, or the ribs and subjacent thickened costal pleura, so as to allow the muscles and skin of the chest wall to drop in to the lung and close the cavity. The former operation, the Delorme-Fowler decortication, usually is not possible in empyemata older than six months. The latter operation, the Estlander or the Schede type—is quite effective, but because of its extensiveness should be performed in more than one stage. These chronic empyemic cavities usually lie beneath the scapula and therefore the original extracostal muscle incision should be made wide of the limits of the cavity so as to provide sufficient pedicled muscle to turn up under the scapula to fill the space between it and the lung.

PULMONARY TUBERCULOSIS

When tuberculous disease is clinically confined, or almost confined, to only one lung and fails to heal under careful sanatorium regime, mechanical therapy is life-saving in certain cases. This aims to put the diseased lung at rest from its constant respiratory movements and more or less to compress the lung so as to obliterate cavities that are often present. This treatment is so effective in properly selected cases that undoubtedly it constitutes the greatest advance made in the treatment of pulmonary tuberculosis during the past fifty years.

Compression of the lung is most simply attained by artificial pneumothorax. This consists in the introduction of filtered air through a small needle into the pleural cavity, thereby pushing the lung away from the thoracic walls, when it becomes a shrunken practically airless immobile mass. As two or more years are necessary for advanced tuberculous lesions to heal solidly, air must be introduced every two or three weeks, as it is constantly absorbed by the pleura. In well selected cases it is almost miraculous how rapidly reduction in cough, sputum, hemoptysis, fever and pulse rate, and improvement in weight and appearance follow the beginning of the treatment. The resting, compressed condition of the lung is found to promote fibrosis which encapsulates the tuberculous lesions. When the lung is believed to be

healed no more air is introduced and what already is present becomes spontaneously absorbed, thereby gradually causing the lung to expand and to function as it did before treatment was begun.

Pleural adhesions prevent adequate compression of the diseased portions of the lung in about one-half of the cases in which pneumothorax therapy is undertaken. If inadequate compression is persisted in the vast majority of these patients will die. It is in this group that surgery is life-saving. One of several operations may be used, or a combination of them, depending on the individualities of the case. The simplest is resection of one phrenic nerve in the neck under local anesthesia. This causes paralysis of one side of the diaphragm—without any dyspnoea—and a certain degree of rest and compression of the overlying lung, especially of its base. In some cases this operation alone is curative, but in the majority further surgery is required.

Extrapleural thoracoplasty indicates resection of the posterior sections of the upper eleven ribs in two or more stages. This compresses the lung and its cavities and puts them at rest, affording permanent protection against lighting up the tuberculous lesions. In a group of 1,159 patients treated at various clinics in this country and abroad, 61 per cent have been cured or greatly improved by surgery. All had previously been under prolonged sanatorium treatment and their physicians expected all of them to die if surgery were not undertaken.

In a certain few cases extrapleural pneumolysis is the operation of choice. This consists in freeing a part of the diseased lung and both pleurae from the chest wall and filling the made hole with fat, paraffine, muscle, rubber dam or gauze. With two patients who were not proper subjects for thoracoplasty, I have obtained astonishing results by combining phrenicectomy with removal of posterior sections of eight or nine intercostal nerves, thereby causing respiratory quiet and a certain amount of lung compression or relaxation. Performed under local anesthesia with due attention to details of technique, the operation is less formidable than thoracoplasty.

BRONCHIECTASIS AND LUNG ABSCESS

These diseases usually exist in combination and are now grouped under the term pulmonary suppuration. This may follow pneumonia in its many forms, operations on the upper air passages, aspiration of

foreign bodies, bacteriaemia, suppurative chronic bronchitis, tuberculosis, suppuration of thoracic neoplasms, empyema with broncho-pleural fistula. Diagnosis is based largely on the history and on expectoration of rather large amounts of sputum that usually is foetid, and on a characteristic roentgen ray picture after bronchography with lipiodol. The chief dangers of the condition are the effects of prolonged toxicity, complicating pneumonia, brain abscess, meningitis or hemoptysis.

Both acute and chronic cases, when first seen, should be treated conservatively. A third or more of the acute cases in which the suppuration is nearer the hilum than the periphery, and in which free communication exists between the abscess and a bronchus, become cured without surgical intervention. A strict sanatorium regime should be enforced and at sufficiently frequent periods the patient should be turned on his side or tipped head down over the edge of the bed, in order to excite the cough reflex and empty the lung of its stagnant waste. Weekly or more frequent aspiration of the intrabronchial pus by bronchoscopy may be given a trial if postural drainage proves inadequate.

If conservative treatment fails to effect progressive improvement, more radical measures should be undertaken. Among the simpler are (1) artificial pneumothorax, which serves best for relatively recent suppuration near the hilum; (2) phrenicectomy, especially for lesions in the lower half or two-thirds of the lung; (3) cauterization drainage through the chest wall, which is relatively safe when the lesions are peripheral. Parenthetically, intrapulmonary suppurative lesions should never be tapped for diagnostic purposes through the chest wall because of the real danger of infecting the pleural cavity that may not be sealed off by adhesions.

A more radical measure that frequently is useful in chronic cases, is extensive extrapleural thoracoplasty or, exceptionally, extrapleural pneumolysis. The resulting pulmonary compression may cure or greatly improve the patient's condition. In those cases in which the suppuration chiefly occupies the uncollapsible large bronchi, these operations are likely to be ineffective.

If conservative treatment fails and the condition is chronic, dangerous and almost unbearable to the patient because of frequent cough and foul breath and sputum, radical removal of all the suppurating tissue alone promises relief. This is possible,

usually, only when the lesions are confined to one lobe, although Graham has used cauterly pneumonectomy for bilateral lesions. The original technique of resecting a lobe with a knife is too dangerous. Safer methods are (1) the several stage removal of the diseased pulmonary tissue with the actual cauterly when the overlying pleural cavity is sealed by adhesions and (2) exteriorization of the diseased lobe in the absence of pleural adhesions, and subsequent resection of the lobe.

THORACIC TRAUMA

Some injuries to the thorax result in much shock and often in tearing of the lung by the ragged ends of broken ribs. Frequently one pleural cavity fills with a mixture of blood and air, the blood coming from the chest wall or from the lung, and the air through a wound in the chest wall or out of a torn bronchus. As the pleural cavity fills, the lung collapses, which may check the hemorrhage and the passage of air if a pulmonary wound is responsible for them. In exceptional cases, open thoracotomy through an intercostal incision with special rib spreaders, will be necessary to secure a bleeding pulmonary, intercostal or internal mammary vessel.

If the wound in the chest wall remains wide open the mediastinal structures swing from side to side with each inspiration and expiration and may fatally embarrass the function of the uninjured lung. To prevent this, the wound should be closed either by suture after debridement and removal of foreign bodies, or by occlusion with a wet dressing or adhesive strapping. After several days, when pleural adhesions have formed and partially fixed the mediastinal structures, necessity for keeping the wound closed no longer remains.

In some cases of open pneumothorax more and more air is sucked into the pleural cavity, but because of the valvular or sphincter-like action of the wound in the chest wall or lung, cannot escape as fast as it entered. The condition is termed tension pneumothorax and is likely to be fatal from pressure on the mediastinal organs or from mediastinal emphysema, unless prompt provision is made to release the air either by repeated aspiration or by leaving a large needle in place in the pleural cavity, the needle being connected with a rubber tube whose free end is placed beneath a mild antiseptic solution in a jar. Empyema frequently complicates thoracic trauma.

DIAPHRAGMATIC HERNIA

Diaphragmatic hernia may be congenital in origin, although the condition may not offer evidence of its presence until years after birth. Abdominal or thoracic trauma may rupture the diaphragm, allowing abdominal organs to migrate toward the relatively lower pressure in the thorax. Or a weakness in one of the normal openings in the diaphragm, usually the oesophageal, may serve as a passage for the thoracic migration of abdominal organs. The lesion usually is left-sided. The liver shields the right diaphragm.

Gastro-intestinal symptoms, notably gastric distress and vomiting, predominate and the diagnosis is definitely made by the X-ray showing parts of the stomach, colon or small intestine in the thorax. Cure may be effected by replacement of the abdominal organs and suture of the diaphragm through a thoracic, abdominal or thoraco-abdominal incision.

Recently Harrington has found phrenicectomy to be a valuable operation in palliating symptoms in patients unfit for radical operation.

CANCER OF OESOPHAGUS

This disease is one of the great tragedies of medicine because it is almost invariably first diagnosed in the terminal stage. Technically satisfactory methods for resection of the cervical or thoracic portions of the gullet are available and in about half a dozen instances have been successfully used in operable cases. Although the operation is dangerous it alone offers hope. Diagnosis of an early oesophageal cancer depends primarily on the patient and the physician taking seriously even a seemingly trivial impediment to the passage of food through the gullet. During the first weeks or months of the disease such firm foods as meat may be noticed momentarily to stick, not every time the particular food is swallowed, but only occasionally. At this early stage only two methods of examination are trustworthy in determining whether the symptoms are caused by cancer; benign stricture from scar within the oesophageal wall or from external pressure as by a goitre, aneurism or mediastinal tumor; pharyngeal or oesophageal diverticulum, globus hystericus or cardiospasm. One of these methods is X-ray examination. In the early stages of the disease the tumor is too small to delay the passage of the usual barium mixture through the readily distensible gullet and, therefore, a nega-

tive barium examination in the presence of a small cancer would be likely. Preston Hickey has his patients, while behind the fluoroscope, swallow firm gelatin cylinders impregnated with barium. The first one swallowed is of about the diameter of a lead pencil and the largest about that of the thumb. If the largest passes freely he considers cancer unlikely. The second method of examination is visual inspection of the oesophageal lumen through the oesophagoscope. This is indispensable in the early diagnosis of cancer.

TUMORS OF CHEST WALL, MEDIASTINUM AND LUNG

These lesions may be benign or malignant. Many of the benign ones eventually become malignant or kill by persistent growth and pressure on vital organs. The advisability of removing any intra or extra thoracic tumor should, therefore, always be seriously considered.

Primary cancer of the lung, unfortunately, arises more often in the primary bronchi than in the periphery of the lung, metastasis to the hilar glands occurs early and the chance of operative cure is slight. Removal of an early bronchial cancer through the bronchoscope offers a possibility of cure.

Even huge solid or cystic tumors of the chest wall, mediastinal regions and lung are removable with far less risk than would be anticipated. The results of surgery in these cases are brilliant. When diagnosis is in doubt, exploratory thoracotomy through an intercostal incision with rib spreaders and positive pressure nitrous-oxide-oxygen anesthesia is almost as safe as an exploratory laparotomy.

HEART

It was conclusively demonstrated during The War that the heart withstands surgical manipulation with remarkable tolerance. It was not so many years ago that physicians believed that death must inevitably follow the mere touching of the heart. Foreign bodies may be removed from it and wounds in its walls may be sutured. Cutler has successfully incised a mitral valve leaflet of a patient with mitral stenosis; Tuffier manually dilated a stenosed aortic orifice and Souttar a stenosed mitral orifice. In each case great clinical improvement followed. The technique of incision of a stenotic mitral valve is now being developed experimentally. The present mortality rate is prohibitively high.

It is well known that the pericardium

may be drained for suppurative pericarditis and that in certain cases of adhesive pericarditis most of the excessive load on the heart may be lifted by simply removing the overlying ribs and cartilages with their periosteum, or even by peeling away the thick scar tissue that envelops the left ventricle—a cardiac decortication.

THYMOPHYSIN IN OBSTETRICS

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Only a few years ago, pituitrin was given a warm welcome by obstetricians. It was used in comparatively large doses and with but small regard for the stage of the labor. Soon, however, reports began to appear in the literature of unpleasant symptoms and at times even serious results as a consequence of its indiscriminate use. So, at the present stage of our knowledge, we believe there is a definite, selective time for its administration, as well as a limit to the number of doses and the amount given at any one dose. It is now pretty generally agreed that with but few exceptions, and then in minute doses, pituitrin is not a safe drug to give a patient during the first stage of labor.

Recently there has come into use in some of the European countries a product called "thymophysin," which gives promise of fulfilling our hopes for pituitrin in the early days: namely, that power of stimulating uterine contractions, with perfect safety, during the first stage of labor.

Thymophysin is a combination of hypophysis extract and the extract of the thymus gland. It contains but a small amount of pituitrin, but the potency is increased by the addition of the thymus extract. The experimental work on guinea pigs was done by Temesvary, who claimed that the experimental basis of the preparation lies in the fact that thymus extract prevents tiring of the uterine muscles, which is always the result of strong contractions provoked by pituitrin.

The first report of clinical work with the preparation was made by Professor E. Graff of the Women's Clinic, University of Vienna. His work was started early in 1926, and it was my privilege during the summer of that year to follow through the labor and delivery of a number of patients to whom thymophysin had been given. Professor Graff was very enthusiastic re-

* Read before the Detroit Obstetrical and Gynecological Society, April, 1928.

garding his results at that time and has become more and more so as his already large series of cases has increased. Practical results obtained would seem to warrant the statement that this preparation can be administered in all stages of labor without fear of harm being done to mother or baby. The tetanic contractions at times seen following the use of pituitrin have never been noted with thymophysin.

We wish here to report the results of our first fifty cases with this preparation. The solution is injected intramuscularly and should be given with a hypodermic needle at least one inch in length. Some of our patients complain of pain at the site of injection, especially if the injection is superficial. The ampoules as put on the market contain about two c.c. We have never seen any indication that the two c.c. dose is too large, although there has been mentioned an instance where two and one-half c.c. caused such severe labor pains that morphine was necessary as a sedative. We have, in several instances, repeated this dose at the end of one hour where the contractions are diminishing and consider this good routine. We have used it several times outside of this series in the third stage of labor, and believe the results were not as satisfactory as with the use of pituitrin.

The average age of our patients was slightly over twenty-five years. Of the para-one, there were thirty-three; para-two, fifteen; para-three, two. Thirty-four of these women were at term and were in the first stage of labor when they entered the hospital. Thymophysin was not given unless a primary or secondary inertia had developed. The earliest any injection was given was fifteen hours, and extending up to forty-eight hours, the maximum time of injection after the beginning of labor. In this particular series of thirty-four, we had eight breech presentations, seven occiput posteriors, one transverse, two old primiparas, and five of premature amniotic rupture. The dilatation varied from one to six cm. In thirty-one of these cases, the results were very satisfactory. In from five to fifteen minutes, with an average of eight and one-half, there was noted a marked increase in the strength of the contractions as well as the frequency. In each case of this classification the labor continued on to delivery, or to complete dilatation of the cervix, in an unusually short time. The shortest time from the injection to delivery was twenty-one minutes, and the longest, three hours. The

average time was one hour and forty-eight seconds. Graff, in his report in a much larger series, says that the average completed delivery took place within three hours. He may be including also the delivery of the placenta, which we did not take into consideration. The remaining three of the thirty-four who were in the first stage of labor did not go on to delivery or to complete dilatation as a result of the injection of thymophysin. Two, however, did show an increase in frequency of pains for one hour, and probably the result would have been different had a second injection been given at the end of one hour, as is now our routine procedure in such cases. We call these three cases failures. Graff found thymophysin to be successful when given in the first stage of labor in 90 per cent of his cases, while ours, in this same group, was 91.1 per cent.

It is claimed that this preparation is too weak to have any effect in cases of abortion and premature birth. However, we gave it to four cases of toxemia, two to three weeks before the expected date, hoping to bring on labor, and were successful in two of these.

Our results were most interesting in a slightly different group—namely, the toxic cases at, or even a few days before term. In this group there were seven. Two had had no previous medication. Fifteen minutes after an injection of thymophysin, one began to have uterine contractions and delivered in about three hours. She was a multipara. The other seemingly showed no signs of labor. The remaining five of this group had all had the usual run of quinine and castor oil one or two days previous to the thymophysin and had not gone into labor. One had had the oil and quinine repeated twice and one had had four injections of small doses of pituitrin without result. Both of these latter, and one other, readily started in labor following the injection of this preparation.

The last group is made up of five women whom we considered were from ten days to three weeks over their expected date, and had no signs of labor. Four of the five had labor pains readily and delivered in a comparatively short time. The fifth one did not go into labor for several days.

In the entire series there were four foetal deaths, but certainly none can be attributed to thymophysin. One baby died thirty-six hours following delivery, and post-mortem examination showed an extensive cerebral hemorrhage. This case

was one of the failures noted above in connection with injection given during the first stage. The baby was not delivered for twenty-four hours following the injection. Later, morphine was administered and in the birth room, with complete dilatation, several injections of pituitrin. The second death is accounted for by a prolapsed cord which was present at the time and one of the reasons for giving thymophysin. Both of the other foetal deaths were in cases of toxemia and the death was diagnosed before thymophysin was given.

In conclusion, we believe our work substantiates the statements which have been made for this new preparation. The successes in the first stage are rather amazing. They are more immediate and regular than at any other time. In all kinds of delays of delivery, the injection of thymophysin caused strong and continued labor pains which led to spontaneous delivery or to complete cervical dilatation, where surgical intervention was possible in a comparatively short time. The results are less regular in other stages of pregnancy and labor, but in selected cases should prove of considerable value in the induction of labor. The work so far shows it to be harmless to both mother and baby.

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MULTIPLE SEBACEOUS CYSTS OF THE SCROTUM—REPORT OF A CASE*

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Caylor found, in an analysis of 236 cases of sebaceous cysts in which operation was performed, that in only two cases were the cysts on the scrotum. These cysts were apparently single. The literature on multiple sebaceous cysts of the scrotum consists principally of single case reports. The most complete contributions are those by Churchman, Daniel, Galippe, Gray, Sheen, Sutherland, Taylor and Wetherby. All the reported cases were observed for only a short time. The condition of the patients several years after the primary examination or operation was not ascertained. The case presented here has been under observation for about two and a half years.

REPORT OF CASE

In October, 1925, I was consulted by a married man aged forty-four, without children, who had

had gonorrhea at the age of eighteen. His present complaint was numerous lumps on the scrotum. Since childhood the scrotum had been sensitive and easily irritated. At the age of twenty he had first noticed numerous small granules under the skin of the scrotum. These granules increased intermittently and irregularly in size, gradually producing a "shotty" or lumpy condition. Occasionally one of the larger lumps would rupture with the extrusion of yellowish-white, smooth waxy semi-solid fluid. After rupture the cavities healed readily without complications. In 1919 a rapidly enlarging tender lump about 10 mm. in diameter was removed from the posterior surface of the left auricle. This proved to be a sebaceous cyst. In 1922, eighteen years after the condition was first noticed, two lumps on the scrotum had reached the size of "a small walnut." A physician was consulted who removed the lumps and made a serum from the contents. Six subcutaneous injections were administered. The gradual enlargement of the remaining lumps was not arrested.

The patient appeared to be well developed and well nourished. On the posterior surface of the right auricle there were three hard sebaceous cysts 5 mm. in diameter. On the posterior surface of the left auricle there were two similar cysts. The general examination was negative. The penis and testicles were normal. Distributed diffusely over the enlarged scrotum were 104 lumps. The lumps were more numerous and larger on the anterior surface, especially on the left side near the median raphe. On palpation the scrotum felt shotty. The size of the lumps varied from 2 mm. to 12 mm. in diameter. On stretching the scrotum they appeared as subcutaneous white marble-like masses. Examination of the urine and Wassermann reaction were negative; erythrocytes and leukocytes were normal; the hemoglobin was 85 per cent. A diagnosis was made of multiple sebaceous cysts of the scrotum.

Four of the largest lumps were removed under local anaesthesia. The largest of these was firmly attached and to remove it completely without rupture it was necessary to excise a small strip of the overlying skin. The incisions healed completely in ten days. Each lump was hard and oblong, but only about half the size it appeared when palpated through the skin. The exterior



Fig. 1.—Three large cysts removed in 1928.

surface was smooth, shiny and pearly white. On section the lumps consisted of a thin wall which was distended by a yellowish-white caseous material.

By January, 1928, several cysts had increased considerably in size. The three largest, about 8 mm. in diameter, were removed in the same manner as in 1925 (Figs. 1 and 2). The incisions

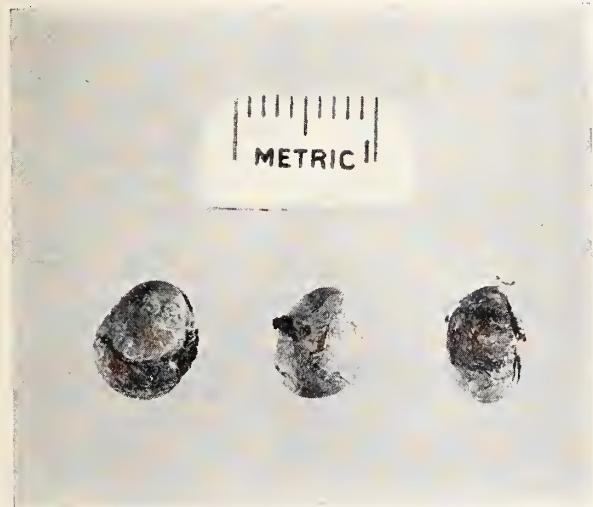


Fig. 2.—Cysts after removal (x2).

healed in eight days. The cysts were identical in appearance and contents to those previously described. Two months later there had not been a recurrence or a change in the size of the remaining cysts.

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SURGICAL TREATMENT OF HYPERTHYROIDISM

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Hyperthyroidism has been for a long time a much discussed subject, and physicians are still debating as to the best method of its treatment. Meanwhile, as the debate continues, we believe that in

the number of patients suffering from this malady there is a marked increase.

Twenty years ago the relatively few who suffered from hyperthyroidism usually consulted the neurologist, or fell to the care of the general medical practitioner, who often had the neurologist in consultation. But after a few years it was found that many of these cases responded very unsatisfactorily to medical treatment, even when this was administered under the best medical supervision. They would improve for a time, but on their return to work they would experience a recurrence of symptoms; and with the repeated exacerbations of tachycardia, loss of weight, muscular and nervous weakness, they usually found themselves less able to withstand the strain of even the most careful living.

The myocardium is able to perform its functions with more or less success through severe acute infections, but it is under chronic conditions as long continued hyperthyroidism, secondary anemia or nephritis that it suffers serious impairment. And during the past ten or fifteen years physicians, when they found hyperthyroidism to be the disturbing cause, have referred the cases more and more frequently to the surgeon. Even in the early efforts against this disease this procedure seemed to offer more hope than medical treatment alone.

The profession owes a debt of gratitude to those surgeons who pioneered in thyroid surgery; for in this early period the physician who referred such patients to the surgeon had to show the courage of conviction, particularly when the outcome was often a matter of grave doubt and uncertainty.

In this period of surgery of the thyroid, mortality and morbidity were due chiefly to a very few factors. First, patients were operated upon when in a period of crisis, before they had had sufficient rest in bed or appropriate pre-operative medical care; second, a wrong type of operation was often performed—i. e., an operation was performed in one stage which would better have been performed in several; and third, not enough gland was removed. It was a very common error to remove but one lobe of a diseased gland, or even part of one lobe, or to perform a ligation of one pole and not advise further operation such as thyroidectomy, later.

As surgeons gained experience, they learned to correct these technical factors and errors of surgical judgment. They

found that by careful selection of time and by good team work of the physicians and nurses in attendance they could bring their patients into a very safe physical and mental state for operation. And in addition, they found that the danger of hemorrhage, and injury to the recurrent laryngeal nerves and parathyroid glands was lessened by the help of trained assistants and a definitely planned technic. Then again they found that much more of the thyroid should be removed than was formerly supposed.

Many other factors have brought about other changes for safety, among them being the use of laboratory methods, greater care in general examination, local anesthesia, combined with gas or ethylene-oxygen anesthesia. And, too, the position of the patient on the table, the preliminary careful examination of the vocal cords, are

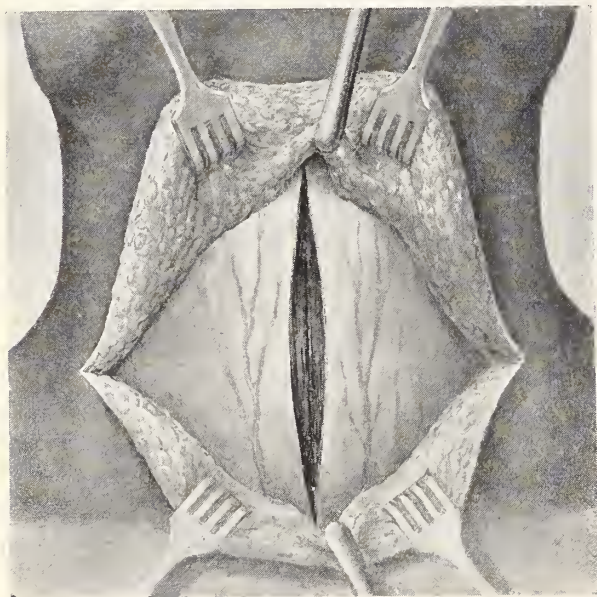


Figure 1

The skin and subcutaneous tissue are well dissected back and midline incision made through the fascia extending from the thyroid cartilage to the sternum, the muscles being split and retracted. (With large goiters the fascia and muscle are cut transversely.)

some of the many important details that should always be observed. To these we should add economy in time, as patients in serious condition might stand well an operative procedure of one-half hour unaccompanied with hemorrhage, when they might not survive an operation of twice that time, with even moderate bleeding.

Iodine has been one of the methods of treatment of diseases of the thyroid with or without hyperthyroidism for over a hundred years. Many of the older physicians had a favorite iodine ointment which they prescribed with very favorable results in the care of many of their goiter

patients. They often combined this treatment with iodine, usually sodium iodide by internal administration. There is no way that one can estimate the good or harm of such administration; for after its long continued administration some of these cases would improve and never again consult the physician, but continue to use iodine, and more than that; they would constitute themselves a committee of one to pass on the remedy to their friends who happened to have large necks. But it has long been recognized, through the investigations of Marine and others, and long clinical experience, that many goiter patients, with mild nervous symptoms, are improved after taking iodine. Now that the commercial salt manufacturer is entering the field, even those who may not need iodine get it morning, noon and night. It will be very difficult for us to prove to ourselves or to our patients whether or not its promiscuous use even in small quantities over a long period of time is harmful or beneficial.

Although iodine was the most common medical agent which was given to all types of goiter patients, hundreds of others of questionable value have also been used. X-ray served as an agent to lessen the size of the gland, and was later combined with radium to combat hyperthyroidism. It was not uncommon, even a few years ago, for the patient to undergo from one to five years of such care, with or without X-ray treatment, before being advised to resort to surgery. It is very obvious that in any such long medical regime the natural resistance of the patient will be very much lessened. The blood picture usually shows an increase in the mononuclear cells, with moderate anemia. In addition, there is a cardiac hypertrophy, the hypertrophy being greater, in our experience, in the cases of adenomatous goiter with hyperthyroidism, than in the primary or exophthalmic types. Also marked changes in the liver, kidneys and adrenals occur in long standing hyperthyroidism.

We believe that part, at least, of the bad results in the early surgery of the thyroid associated with hyperthyroidism was due to these serious constitutional symptoms incident to the long continued hyperthyroidism and delayed operation. And the improvement in the condition of patients with hyperthyroidism today is due to the following facts: The co-operation of the medical attendant with the surgeon, the type of operation, the shortening, through earlier operation, of the

period of disability, the suiting of the operation to the patient and not the patient to the operation, and the careful supervision of iodine. We believe that in these cases we should have a very definite plan to follow.

Early diagnosis: Patients are presenting themselves for examination much earlier than in former times. The education of the laity is such that he comes in earlier to learn the cause of his rapid heart, weakness, or loss of weight. Hyperthyroidism should always be considered as a factor in the above symptoms, and a careful examination, with a carefully written clinical history, combined with labora-

made here as an aid in diagnosis, in addition to repeated basal metabolic rates. Usually we find that the trachea is not in the median line, being pushed to one side by the adenomatous goiter. It is quite common for cases of retrosternal goiter, associated with hypothyroidism, to have associated cardiac hypertrophy, directly due to the extra work the heart is required to perform over months and years of time. We wish especially to call attention to the fact that many of these patients are treated for years with digitalis, on a basis of incorrect diagnosis.

DIGITALIS

We believe that digitalis is distinctly contraindicated as a routine in the treatment of hyperthyroidism. It should be used with great care even in auricular fibrillation, when the fibrillation is due to hyperthyroidism. The tachycardia is a symptom, and the associated heart disease is due to hyperthyroidism, which causes the patient's disability. The myocardial changes and edema following long continued hyperthyroidism can best be avoided, after very careful digitalization when necessary, by early operation. There is no doubt in the minds of surgeons of experience that patients undergoing operation for hyperthyroidism who have been taking digitalis for a long time, are distinctly poorer risks than those who have not had this drug. Rest in bed, bromides, iodine and ice over the cardia and goiter will, in our opinion, be the method of choice in the treatment of tachycardia with or without fibrillation, when preceding or following an operation, with very careful digitalization for a short period when indicated.

It would seem that if digitalis should be used it would be best to reserve its use for cases that have been operated upon, or for cases of fibrillation, observing the utmost care. We think that patients should not be operated while taking digitalis, and that when it has been taken, several days should elapse before operation.

It is quite surprising how patients will recover after the removal of an adenomatous goiter associated with hyperthyroidism, even in the presence of cardiac hypertrophy and fibrillation. Patients with cardiac complications and hyperthyroidism should remain in bed from ten days to three weeks before operation, and the operation should not be performed in the presence of edema. But many patients with edema secondary to thyrotoxicosis

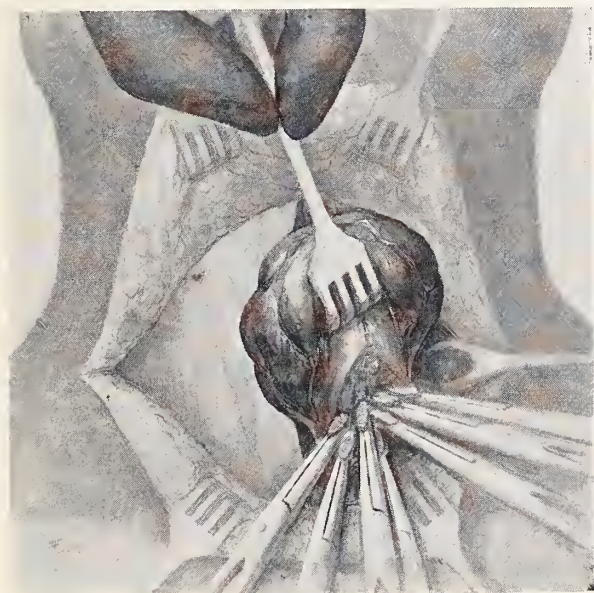


Figure 2

The goiter is manipulated with the aid of a sharp retractor. Small forceps are used to take small bites of the capsule and thyroid tissue, keeping away from the posterior capsule of the gland.

tory findings should be made. In young people, especially those with a familial history, the differential diagnosis of acute miliary tuberculosis merits our first consideration. This is usually not difficult when routinely a careful physical examination is made, combined, if diagnosis is questionable, with medical consultation and X-ray of the chest, also repeated basal metabolic rates. We do not believe that the basal metabolic rate of itself should be relied upon to tell us when to operate, but should be used only to confirm or aid in diagnosis. And here we wish to call attention to the cases of retrosternal goiter associated with moderate hyperthyroidism. In many cases of this type the position of the thyroid is such that mistakes are made in diagnosis. It is essential that a carefully made X-ray examination be

will become good surgical risks after good medical treatment. A well planned operation can safely be performed in the majority of cases even with cardiac complications when we have evidence that the heart condition is secondary to the hyperthyroidism. Such operations should, of course, be performed with dispatch, using gas analgesia and local anesthesia, but they should never be performed until the patient has been under good pre-operative

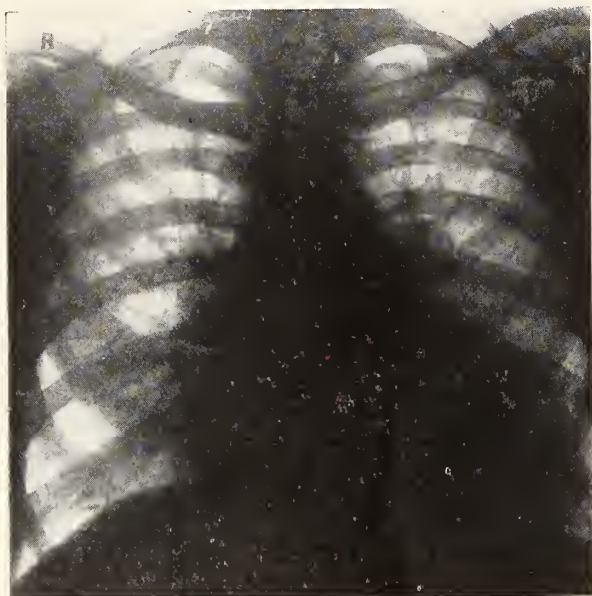


Figure 3
Enlarged heart due to chronic hyperthyroidism. Patient was treated for heart disease for ten years. Marked improvement after thyroidectomy.

care. In some cases hemi-thyroidectomy will be the operation of choice. We have operated upon a number of these bad risks with remarkable results. After these operations patients should have expert medical care.

LUGOL'S SOLUTION

As has been stated, the use of iodine is not new; but it was upon the recommendation of Plummer in 1922, that it should be used routinely in primary hyperthyroidism or exophthalmic goiter cases before and after operation. This was a definite and distinct advance in both the factor of time saved for the patient and increased margin of safety in severe cases with almost the elimination of post-operative crisis, familiar to experienced surgeons. While the use of Lugol's solution was recommended in the case of Graves disease, it was not considered advisable to use this agent in the case of adenomatous goiter associated with hyperthyroidism. General belief was that in this first type we were dealing with an altered or perverted secretion, and in the latter type

with an excessive amount of normal secretion. Hundreds of experienced surgeons found that the Lugol's solution worked like magic, especially on the very sick patient; and just as certain was it that the post-operative hyperthyroidism did not occur, or if by chance it did, the giving by mouth or by hypodermoclysis from twenty to sixty mms. of Lugol's solution effected an abatement of the crisis. For a few months we give Lugol's solution to the Graves disease class, both preceding operation and immediately after, and at times for a few weeks after operation, with extremely satisfactory results to all concerned. However, in 1923 we had several cases of the mixed types; that is, adenoma for a year or more, and then a sudden onset of symptoms of Graves disease, with marked staring eyes, if not exophthalmus. In these cases iodine acted as well as in definite primary or exophthalmic types. After a few months we began using Lugol's solution as a post-operative measure in the adenomatous goiters associated with hyperthyroidism, with the result that in these cases we no longer saw marked post-operative hyperthyroidism. After a few months of this experience, we began about three years ago to use Lugol's solution both pre-operatively and post-operatively in all toxic goiters with most satisfactory results. It would seem that the action of iodine neutralizes the thyroxin molecule which in clinical experience acts the same, whether in the primary exophthalmic case or the case of adenomata associated with hyperthyroidism. We have noted in our cases an increasing colloid in patients after iodine administration.

The writings of Graham and others, during the past few years, indicate the same results. We believe that Lugol's solution should not be considered in any way a cure for hyperthyroidism, and that it should be given only a week or two before operation, with post-operative administration as necessary. Physicians often see patients who have mild symptoms of hyperthyroidism, often secondary to mental or nervous strain, from changing one's occupation, or after severe illness or family bereavement, or in cases of extreme effort. Most of such patients will not need surgery, but great care is needed to give them good medical advice. A few of these cases will be found to have low metabolic rates—as low as minus five, and are often helped by a few small doses of either Lugol's solution or thyroid extract.

Such treatment, however, should never be given except directly under the advice of the physician.

Patients who have had long continued iodine administration combined with radiotherapy or digitalis we feel are distinctly bad risks for operation, and their recovery is not as complete as those who have had iodine, but no digitalis nor radiotherapy. In some cases of primary hyperthyroidism we have used thyroid extract immediately before operation, with distinct benefit, as a rule giving two to three grains in one dose.

The metabolic test we do not consider a



Figure 4

Enlarged heart due to chronic hyperthyroidism. Patient treated for eight years for heart disease. Marked improvement after thyroidectomy.

true indication of operability. Some patients with relatively higher rates will be in much better condition for operation than others with lower rates. Ordinarily patients who cannot relax well in bed nor eat and sleep well are not in good condition for operation, no matter what the basal metabolic rate may be, and blonde patients are distinctly poorer risks than brunettes with the same metabolic rate.

In a large general hospital it will not be convenient or possible to perform operations in the patient's room, as advocated and practiced by Crile; but if we prepare goiter patients properly, and carry expert team work to the operating room, the result will be almost as satisfactory. It is obvious that patients should not be allowed to wait in the operating room on account of delay on the part of surgeon and associates. It is very desirable that the anesthesiologist have a little visit with the patient

beforehand and accompany him to the operating room. Gas-oxygen anesthesia or analgesia is the anesthetic of choice, combined with local anesthesia, using one-half of one per cent procain or novocain. The gas analgesia should always be given by an expert, and should begin the moment the patient is on the operating table, or in an adjoining room, if available. The local anesthetic, novocain or procain, should not be started until the patient will be unaware of the needle insertion. Usually from two to four ounces will be sufficient for the operation. If some of the local anesthesia is injected into the gland beneath the capsule it will aid very materially in the operation.

It is obvious that experienced assistants are part of the operating team, and when these are not available we question the desirability of any thyroid operation. Hemorrhage must be avoided by careful technique, as the sick thyroid patients will not do well if the operation is accompanied with hemorrhage. We have found it very desirable always to remove one lobe first, and to tie the vessels on one side completely before making an examination of the opposite lobe. By this means the danger of a forcep becoming unclamped is eliminated, and the danger of tracheal pressure or collapse is lessened on account of the extra room given by the removal of the first lobe. We have not had any permanent injury to the recurrent laryngeal nerve. This is avoided by keeping well up on the lateral capsule, and by using small clamps. At times, in the case of very sick patients, it may be found advisable to perform a hemi-thyroidectomy at this step, and remove the other lobe within 48 hours or later. By such a plan of technic combined with the use of all modern methods and skilled anesthesia, operations on the thyroid, accompanied by hyperthyroidism, have become very safe. And it is to be remembered that a larger part of the gland should be removed than was formerly done. We believe that in cases of very severe symptoms about nine-tenths had better be removed, as part of the morbidity that follows goiter operations is caused by not removing enough of the gland.

RECURRENCES

Yet, in spite of removing more and more of the gland, every surgeon of experience will encounter some recurrences. A certain number of patients will have recurrence of symptoms appearing in from a few weeks to months after the primary

operation. In our own series we noted recurrences in nine patients, in a total number of 500 cases. This is relatively very few, and now that we do practically no ligations, and but a few hemi-thyroidectomies, very few patients undergo more than one operation. All of our cases of recurrence have been patients who had rapidly developed hyperthyroidism before the first operation. In addition to the nine cases of recurrent goiter in our series, we have operated upon seven cases who had had operations elsewhere, several more than six years before, with relief of symptoms until a few weeks or months before presenting themselves for examination. When recurrences do take place, with return of all symptoms of the former disease, even though not so marked as a rule, little time should be lost in medical treatment. If the symptoms do not subside and remain quiescent after a few weeks of iodine, rest, and so forth, the offending lobe of regenerated thyroid should be radically removed. A careful check up should again be made to remove all evidence of focal infection. A persistent metabolic rate indicates that not enough thyroid has been removed. And in this connection, we think that it is highly important that a thyroid operation should never follow too soon after tonsillectomy or removal of teeth, but that from six weeks to two months should elapse before operation.

POST-OPERATIVE TREATMENT

In severe cases, in addition to morphine freely and ice to precordium and to the head, we advise Lugol's solution from m 20 to 30 by hypodermoclysis in 1,000 c.c. normal saline. This solution is given deep in the axillary region, not in the breasts, and we advise 100 c.c. every hour, in ordinary cases, and the needles are allowed to remain for 24 hours or more. In addition to this, Lugol's solution MX q 4 hours is given for a few days, with a large amount of fluids by mouth, and morphine sufficient for comfort. We have had but few cases of post-operative hyperthyroidism since this regime was started over three years ago. During this time the number of cases operated upon has increased, and with it the degree of hyperthyroidism. After three or four days the Lugol's is reduced to MV tid-pc. The patients usually leave the hospital before ten days, very much improved. In some cases we advise the family physician to continue Lugol's solution for a few weeks, giving about MV daily. The twenty to thirty minute opera-

tion must succeed the operation of a longer period, if success is to be attained.

RESUME OF FIVE HUNDRED CASES OF GOITER WITH HYPERTHYROIDISM

Adenoma with hyperthyroidism	389 cases
Primary exophthalmic goiter	111 cases
Females	428
Males	72
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	Av. age Youngest Oldest
Adenoma with hyperthyroidism.....	37 yrs. 11 yrs. 70 yrs.
Primary exophthalmic goiter.....	33 yrs. 9 yrs. 65 yrs.
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Average duration of symptoms:—	
Adenoma with hyperthyroidism	1 yr. 7 mos.
Primary exophthalmic goiter	10 mos.
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	Average meta- bolic rate Lowest Highest
Adenoma with hyperthyroidism.....	Plus 37 Plus 4 Plus 100
Primary exophthalmic goiter.....	Plus 52 Plus 9 Plus 150
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Type of Operation:—	
Bilateral resections	464 cases
Lobectomy	33 cases
Ligation (all before 1923)	3 cases

RECURRENT CASES

Seven cases of primary exophthalmic goiter. Four cases had one previous operation from four months to two years before.

Three cases had two previous operations from five months to eight years before.

Two cases of adenoma with hyperthyroidism operated on 11 and 12 years before.

We also operated on seven cases of adenoma with hyperthyroidism who were operated on elsewhere.

COMPLICATIONS

Two cases of post-operative hemorrhage with recovery.

Four cases of parathyroid tetany. Two cases transient—complete recovery.

Two cases still under observation and on parathyroid extract at times.

OPERATIVE MORTALITY

20 cases4%

In the twenty cases there were eight cases of adenoma with hyperthyroidism, ten cases of primary exophthalmic goiter, and two cases of recurrent primary exophthalmic goiter. All cases were toxic, two cases died after ligation, five cases had marked cardiac enlargement. Several cases had had prolonged digitalis and X-ray treatment.

SUMMARY

There has been a distinct advance in the surgery of the thyroid during the last five years, with lessening mortality and morbidity. Surgical success will best be obtained by shorter medical treatment, i. e.,

by avoiding long continued Lugol's solution and digitalis. If either Lugol's solution or digitalis is given, patients should be carefully checked by the physician and the dose varied according to the symptoms. In well advanced cases of hyperthyroidism, either primary or associated with adenomata, it is well to remember that lowered metabolic rate does not mean that cure is effected. A persistence in long medical treatment is the chief factor in the morbidity and increased mortality after such treatment. Radium and X-ray have a questionable part in the pre-operative care of patients of the ordinary case of hyperthyroidism; for while metabolic rates may be lowered, the operation is much more difficult after such treatment, and when the treatment extends over a long period of time, serious injury to the heart follows.

Patients should be instructed to have regular examinations at stated periods after operation for hyperthyroidism, and iodine is not given after two or three months, unless there is special reason for such. A metabolic reading should be made after operation; at least two within the first year, and one each year for three or four years when possible.

SURGICAL PROCEDURES IN CARCINOMA OF THE LARGE BOWEL*

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The incidence of carcinoma of the colon and rectum combined is almost identical with that of carcinoma of the stomach. The overwhelming preponderance of malignancy in the large intestine as compared with that in the small intestine is definitely borne out in the experience of all surgeons. Some years ago a report from the Mayo Clinic showed, according to necropsy data from a number of clinics on many thousands of cases, that of all cases of carcinoma of the entire intestinal tract only about 3 per cent had invaded the small bowel. In the Mayo Clinic there were records of 24 cases of carcinoma of the small intestine as compared with 1,822 of the large intestine and rectum, and 1,689 of the stomach.

The accuracy of diagnosis of lesions of the gastro-intestinal tract has been more materially influenced by advances in roentgenologic technic during the last ten years

than by any other factor. While it is true that a higher degree of accuracy exists in the interpretation of roentgenograms of gastric lesions, it seems reasonable to assume that increasing experience will promote developments which will bring the roentgenologic diagnosis of colonic lesions to the same level. Certainly, more routine study of the colon by the employment of the barium clysma is indicated in vague abdominal disorders of indeterminate origin, and no doubt such study will result in the detection of many lesions which otherwise would not be suspected until the disease had become widespread.

CECUM AND SIGMOID MOST FREQUENT SITE

The two mobile terminal segments of the large bowel, the cecum and the sigmoid, are most frequently invaded by carcinoma and the symptoms produced by the neoplasm differ markedly; likewise, the pathologic type and grading of the growths and the procedures indicated for their extirpation are distinctly different. The symptoms of carcinoma of the right half of the large bowel, which, strictly speaking, includes the hepatic flexure and proximal half of the transverse segment, revolve around a group of phenomena relating to physiologic disturbances. In the main, the presence of a hitherto unsuspected tumor or of profound anemia unexplained by visible loss of blood, or an indefinite type of ailment simulating chronic cholecystitis or chronic appendicitis, are the three usual syndromes of malignancy in this portion of the bowel. On the other hand, obstructive phenomena or blood on the stool or in the stool, and occasionally the presence of a slow-growing tumor, represent the typical and characteristic symptoms of carcinoma of the left side of the colon. It should be emphasized that loss of weight, cachexia and general symptoms of wasting due to the carcinoma, particularly if it is situated in the distal segment of the bowel, are evidences of an advanced stage of the disease, and radical treatment can rarely be carried out.

The distinct functions of the two segments of bowel, and differences in type of growth customarily found in each constitute the reason why the symptoms differ. The right half of the colon is the absorbing half comparable in function to the small bowel with which it has a common embryologic beginning. From the papilla of Vater to the middle of the transverse colon the large intestine develops with the

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small intestine from the midgut, and the function of this whole division is digestion and absorption. Beyond the middle of the transverse colon the large bowel is delivered from the hind-gut and its duty is one of storage. The two halves are not only different anatomically, so far as the structure of the wall of the bowel is concerned, but they derive their blood supply from different sources, the superior mesenteric supplying the digestive or absorptive part of the gastro-intestinal tract and the inferior mesenteric supplying the distal half.

DIFFERENCES IN PATHOLOGY

Pathologically, the growths in the right half of the colon present large, elevated, ulcerating surfaces, covered generally with stubby protuberances, bleeding easily, and lending themselves readily to infection, but they rarely produce obstruction. Mainly, they affect the normal physiologic equilibrium by causing intoxication, desiccation and anemia from absorption and derangement of the function of the mucous membrane. They seldom encircle the whole circumference of the colon and acute or even subacute obstruction is rarely a factor. On the other hand, in the distal segment of the large bowel growths usually invade the lateral wall and show a tendency to encroach on the circumference of the lumen, producing diminution in its size followed by characteristic symptoms of chronic, subacute or even acute obstruction. Acute intestinal obstruction secondary to malignancy is an extremely grave condition and occurs in approximately 5 per cent of all cases of carcinoma of the large bowel. Unless it is relieved a serious, acute lethal condition is imposed on the chronic malignant state, demanding immediate intervention and the exercise of careful surgical judgment. Usually this acute obstruction is ushered in out of a clear sky without premonitory warning, the presence of the malignant lesion being entirely unsuspected. The chances are six to one, according to Burgess, that the lesion is in the left side of the colon if it is the etiologic factor to be considered.

AFFECTING OPERATIVE MORTALITY

Operative mortality differs in the different segments of the colon depending on different factors: (1) anatomic conditions such as blood supply and mobility; (2) the stage of the disease and the grade of malignancy; (3) the rapidity of growth and presence or absence of metastasis; (4) fixation of the growth which may or may

not be inflammatory and which determines the extent of operative procedures, and (5) the degree of obstruction.

It is a good working rule that all carcinomas of the distal segment of the large bowel should be treated by a graded procedure, and while this rule probably applies likewise to the proximal segment, our experience does not warrant the assertion that all right-sided carcinomas of the colon should be operated on in multiple stages. Recently, however, in the Mayo Clinic the tendency has been to make an ileocolostomy between the terminal ileum and transverse colon for carcinoma of the right side of the colon, and at the end of two weeks to undertake the resection.

That this has resulted in lowering the mortality rate is unquestionable, and probably the procedure will continue to be followed. When the right side of the colon is resected in one stage, provision must be made for the relief of tension from gas and this may be accomplished either by bringing the end of the colon up to the abdominal wall, leaving the purse-string sutures as a guide for future puncture, or by making an enterostomy in the terminal ileum about 40 cm. from the line of anastomosis. I have found the latter procedure extremely satisfactory and I use it as a routine in one-stage operations on the proximal colon. In about one case in five it will be necessary to open the tube on from the fourth to sixth day for the relief of distention from gas; this overcomes the ballooning of the intestine, relieves the symptoms, and protects the suture line. The tube drops out of its own accord about the sixteenth or seventeenth day if it has been inserted according to the Witzel technic. I have not observed an instance of a fistula persisting following its removal. The mortality from carcinoma of the colon is due not so much to the open operation employed in making the anastomosis as it is to the permeability of the wall of the colon which is markedly increased under even slightly obstructive conditions. Normally the large bowel is thin-walled, particularly in its proximal division, and the handling necessary to mobilize the growth squeezes virulent organisms out into the adjacent tissues and peritoneal cavity, and occasionally fatal peritonitis results. Mobilization is not difficult if one divides the peritoneal attachment of the bowel to the lateral parietal peritoneum from the outside and rotates it mesially, wrapping the fat and glandular tissues in with the bowel to be sacrificed, but it is impossible to avoid

a certain amount of handling of the growth in this process and despite careful packing away of the contents of the abdomen and wrapping the growth in gauze, infection occasionally takes place. The two-stage operation reduces this tendency by permitting more thorough cleansing of the segment to be removed and at the same time permitting rehabilitation of a desiccated patient by the institution of measures to increase the fluid balance and build up nutrition.

ADVANTAGE OF COLOSTOMY

I usually establish a colostomy opening at the primary operation on the left half of the colon, and at that time the presence or absence of visceral or glandular metastasis and the advisability of undertaking subsequent measures for resection are determined. The colostomy proximal to the growth permits irrigation which reduces inflammatory reaction around it and permits a more radical second-stage operation to be carried out. Occasionally it is noted that at the end of two to three weeks following intensive local treatment a growth which was tightly adherent and questionable for resection is relatively mobile and often may be satisfactorily removed. I believe that most of the fixation around neoplasms of the colon is due to inflammatory reaction rather than to malignant extension and for this reason perhaps one is justified in undertaking some of the more extensive operations which, although dangerous from the immediate operative standpoint, may yet yield satisfactory end results. Resection and anastomosis following the preliminary drainage operation is accomplished in the left half of the colon with a mortality rate comparable to, and in recent years in my experience, slightly lower than that following operation on the right half. The value of aseptic anastomosis in operating on the large intestine is unquestionable but there are definite limitations to its application. Experience with two types of technic has convinced me that aseptic re-establishment of the lumen of the bowel after resection is desirable. I have used the Parker-Kerr type of anastomosis satisfactorily in a series of cases and more recently have devised a clamp which has proved adaptable to the various types of anastomoses, either end-to-end or lateral. This clamp is made after the manner of the Payr clamp with the addition of a central blade, which allows a sufficient amount of pressure on both arms of the bowel to assure agglutination while

sutures are placed over the clamp on its anterior surface and drawn taut with inversion of the edges of the bowel without opening. Breaking through the diaphragm completes the anastomosis. In a series of experiments on dogs, and in a series of ten clinical cases following resection of the colon, the technical results have been satisfactory. In the absence of a diaphragm and secondary hemorrhage the method seems worthy of consideration. Any procedure which permits re-establishment of the continuity of the lumen in a clean manner is of great value and yet one feels that the failure of many types of aseptic anastomoses to be generally accepted has been due not so much to the technical features of the operation as to the disregard of fundamentals in the desire to accomplish a perfect primary operative maneuver. Indubitably, measures both local and general which tend to a reduction in the virulence of the infected content of the large intestine by drainage and application of medicaments directly are the most important considerations. Several outstanding factors of safety present themselves in the surgical management of the whole group of diseases of the colon and rectum:

1. The isolation of these cases into a separate division, under the individual management of a small group of clinicians and surgeons, has been found to be of the greatest value.

2. The establishment of routine preoperative and postoperative measures. The preoperative measures aim at general rehabilitation, local reduction of infection around the growth, cleansing the bowel as much as possible, and restoration of the normal physiologic equilibrium by the ingestion of large amounts of liquid and a proper carbohydrate dietary regimen before the institution of colostomy. This renders the operative procedure more simple and less likely to be followed by complications.

3. The introduction of drainage procedures and graded operations has been found to extend the horizon of operability, to reduce the immediate mortality rate, and to secure better end results. Economy of time in the preparation and treatment of such patients is a false asset. Patients suffering from carcinoma of the colon and rectum except the few who are first seen when acute obstruction is present must not be operated on in an emergency. Subacute obstruction in case of carcinoma of the colon is not an indication for emergency laparotomy. Usually, with rest,

morphine, and irrigations the condition clears up and the radical operation may then be carried out satisfactorily.

4. Another step in the preoperative preparation of such patients has been instituted recently in the Mayo Clinic, namely intraperitoneal vaccination by the introduction of mixed vaccine of colon bacilli and streptococci with the idea of producing immunization against subsequent infection. The application of the procedure is too recent to be reported on.

5. The choice of an anesthetic is an important consideration. Recently I have used spinal anesthesia in all cases of carcinoma of the colon and transsacral anesthesia in carcinoma of the rectum. Miles has long been an advocate of the employment of spinal anesthesia in this type of case and my own experience convinces me of its advantages. The facilitation it lends to adequate exposure by producing complete relaxation, the absence of pulmonary complications and the satisfactory immediate postoperative convalescence are ample evidences of the desirability of continuing such a program.

OPERATIVE RESULTS

In the Mayo Clinic at the present time the mortality rate following resection of the right and left colon is practically identical. Statistical study has shown that the mortality rate is slightly higher following resection of the right half for carcinoma alone than if tuberculosis, actinomycosis, and other surgical diseases are considered. If the two segments are divided sharply into right and left, however, one finds that the mortality rate is approximately the same if all these diseases are included. Satisfactory end results after resection of any segment of the colon, when compared with results from operation for carcinoma of the stomach, uterus, esophagus, or other organs, belie the reputation with which this type of operation has so long been identified both among the medical profession and the laity. Statistical studies of large groups of cases of carcinoma of the colon and rectum indicate that freedom from recurrence for from three to five years shows high percentages in cases of radical resection. A recent study of end results in resections of both segments of the colon at the Mayo Clinic over periods of three and five years, showed an encouraging number of persons to be alive and free from recurrence. In a large group of cases in which the right half of the colon had been resected, which I reported in

1923, 47 per cent of the patients were alive and free from recurrence at the end of three years. Likewise, in a group of cases of carcinomas of the rectum recently reviewed it was found that 48 per cent of the patients were living and free from recurrence at the end of three years. These results emphasize the necessity of early diagnosis and the institution of radical methods of extirpation. The clinician who first sees the patient will render the highest service not only in urging early extirpation of the growth, but by removing the widespread prejudice which exists against colostomy, and the unhopeful view which generally is taken of this type of disease. The anxiety with which the average layman views an artificial anus is greatly exaggerated, and assurance that such a procedure is entirely compatible with comfortable and useful existence will go a long way toward allaying the present prejudice against it. The well known tendency of carcinoma of the colon to remain local for a long time, and the satisfactory results following removal, as well as the reduced mortality which improvement in surgical technic has brought about, are factors which contribute greatly to a favorable outlook in these cases.

THE DIFFICULTIES SOMETIMES ENCOUNTERED IN DIFFERENTIATING SYPHILIS FROM TUBERCULOUS MENINGITIS*

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In some cases of meningitis, historical, clinical, and laboratory data might fortuitously conspire in such a way as to make it difficult to differentiate between tuberculosis and syphilis as the etiological agent. This difficulty is well illustrated by the following case reports:

Case 1—Was admitted to the hospital September 17, 1927 in a psychotic state. Five years prior, he had a chancre. Wassermann positive and refused treatment. For a year previous to admission he was "not right mentally", "talked of ghosts and supernatural things". Married a demimonde in November 1926. Separated in three weeks and became depressed. At 3:00 p. m., September 12, 1927, he was too weak to work. At 6:00 p. m. his "actions became strange", he asked for things he already had, "dropped things", "wouldn't eat", became unmanageable and was taken by the police to Receiving Hospital, where he remained until transferred to this institution. Receiving Hospital reported a positive blood Was-

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sermann, a temperature that hovered around 101° F., and an agglutination with paratyphoid A in dilutions 1:40.

On examination, the patient was confused and talking irrelevantly. Male, white adult, age 26 years, fairly well nourished with rectal temperature of 100° F. and pulse of 90. Right pupil was larger than the left. Both reacted to light sluggishly. Maxillary sinuses were cloudy. B. P. 95/65. Bladder was almost to umbilicus. Triceps reflex was excessive on the right. K.K's were not obtained. A suggestion of Rombergism was present. Blood Wassermann, Kahn one plus, Kolmer 22100.

Tentatively: Differential diagnosis was to be made between: (1) Typhoid fever, (2) Encephalitis epidemica and (3) Central Nervous System Syphilis.

COURSE IN HOSPITAL

September 18 — Temperature 101° F., F. P. 118/90. More rational. Being catheterized regularly.

September 19—K.K's and A.J's not elicited. No Kernig, mentally confused. Left pupil larger than right and irregular. Slight reaction to light. Lumbar puncture results: Pressure, 56 mm. Hg., fluid blood tinged, 240 cells, (monocytes), Pandy three plus, Kolmer 32100, Kahn two plus, Lange 0000023210, Mastic 2222110000, sugar 21 mgm., Widal negative for typhoid and for paratyphoid A. and B.

September 20—Diagnosed as acute meningo-vascular syphilis. Iodides started by mouth.

September 21—More confused. Lumbar puncture results: Clear fluid, pressure 12 mm. Hg., 530 cells, Kolmer 32100, Lange 0000012321, Mastic 4444444433, culture and smear for acid fast bacillus were negative.

September 22—Placed on intensive anti-luetic therapy with intravenous iodides and neoarsphenamine.

September 25—Lumbar puncture results: Pressure 22 mm. Hg., 308 cells, Pandy two plus, sugar 31, xanthroproteic, Kahn four plus, pellicle present, smears negative for tuberculosis.

September 26—Ptosis of left upper lid and left facial paralysis present.

September 27—Stuporous, condition critical. Lumbar puncture results: Pressure 32 mm. Hg., 150 cells, Pandy three plus, pellicle present, smear negative for tuberculosis, Lange 0000001221, Mastic 0024442100.

September 28—Twitching of masseters.

September 29—Temperature 101° F. Paresis of left levator palpebrae, Blood pressure 140/90. Pulse 145. Condition much worse despite anti-luetic therapy.

September 30—Medullary involvement.

October 1—Spinal fluid turbid. Smear negative for Koch's bacillus.

October 3—Slight retraction of head, comatose, cyanotic, dyspneic. Patient expired, just 21 days after the manifestation of acute symptoms.

Final clinical diagnosis, (as signed on death certificate):

Acute meningo-encephalomyelitis, luetic.

AUTOPSY REVEALED

(1) Chronic generalized intra-abdominal caseous tuberculous lymphadenitis.

(2) Tuberculous cerebro-spinal meningitis and ependymitis, (confirmed by microscopy).

Case 2—Admitted October 25, 1927, complaining of headaches and "stomach trouble."

History includes seven months of projectile vomiting following meals with epigastric pains radiating to right hypochondrium unmitigated by eating or by soda, 15 days of severe bi-temporal and girdling headache exaggerated by straining, three days of thumping occipital and interscapular pain worse on walking, addiction to alcohol, (two to ten glasses of whisky a day supplemented by beer and wine), questionable luetic infection in 1919 with questionable reinfection three months prior to admission.

Examination revealed a well nourished male adult, age 36 years. Temperature 99.6°, pulse 90. Respirations 18. Both temples were tender. Antri were hazy. Mouth exhibited a white membranous lining, severe gingivitis, and a coated tongue. Ophthalmoscopic: O. D. Cupping absent disc outline obliterated by exudate at nasal margin. O. S. No cupping, exudate as in right but not so marked. There was a small area of hypesthesia between the left 7th and 8th thoracic planes posteriorly. Brachial arteries were a trifle thickened. The left patellar and left arm reflexes were slightly increased. The right upper abdominal quadrant was tender. The malleoli and iliac crests were questionably hypesthetic to vibration. Flexion of the neck was resisted and caused occipital pain.

TENTATIVE DIAGNOSIS

(1) Chronic Alcoholism with serous Meningitis, (toxic).

(2) Central Nervous System Syphilis.

Following the above diagnosis, the blood Wassermann was returned negative.

COURSE IN HOSPITAL

October 27—Lumbar puncture results: Pressure 12 mm. Hg., Pandy one plus, 294 cells, (lymphocytes), sugar 34, Kolmer and Kahn negative, Lange 0000132100, Mastic 0000000000.

October 29—Severe headache. Arm reflexes easily exhausted. Left K.K. more active than the right. Plantar reflexes hypersensitive. Restriction of visual fields to rough test. Giant ophthalmoscopic examination questions the presence of retinal exudate and considers the fundi hyperopic. Encephalitis entertained as a possible diagnosis.

October 31—Diplopia. Continuous vomiting. Syphilis as the etiological agent abandoned. Tuberculous meningitis more than likely present. Lumbar puncture results: Pressure 14 mm. Hg., 600 cells (90% mono.), Pandy three plus, Kolmer negative, Kahn two plus, sugar 95, Lange 0000123310, Mastic 1110000000, smear negative for tuberculosis.

November 4—Continuous vomiting, foul breath, pain in left parotid and temporal region. Hyperesthesia over right frontal region. Photophobia, suggestive Brudzinski and Kernig.

November 10—Morose, irritable. Diagnosis of tuberculous meningitis generally accepted.

November 11—Lumbar puncture results: Pressure 28 mm. Hg. Yellowish tint to fluid. Cells 427 per cm. (mononuclears) Pandy two plus. Smear and culture negative.

November 14—Chest Xray negative for tuberculous, (primary focus being sought). Can't bite on left side of mouth.

November 15—Headaches most intense. Right palpebral fissure smaller than the left. Aural tintinnus most marked on the right. Optic papilloedema present?

November 17—Lumbar puncture results: Pres-

sure 8 mm. Hg., cell count 520 per cm. Pandey two plus. Smear and culture negative.

November 18—Unquestionable papilloedema.

November 21—Hyperesthesia over left fifth cranial nerve. Left pupil larger than right. No retinal miliary tubercle. Hearing impaired on left side. Reflexes more active on the left side. Reflexes generally hyperactive. Additional history obtained: Indurated ulcerative penile sore 1919, followed by local and general antiluetic treatment for three months. First blood Wassermann three months after starting treatment was negative. Yearly Wassermanns were negative. Had another soft penile sore 1927 followed by active antiluetic therapy for twenty days.

November 25—Lumbar puncture results: Pressure 32 mm. Hg., Cells 467. Kolmer 44444. Kahn four plus. Lange 4455555542, Mastic 5555552110.

November 26—Intravenous iodides (100 ccs. of 10% sodium iodide given daily with ascending doses of neosphenamine (starting at 0.2 grs.) and mercury, Gr. 1. every third day.

December 2—Remarkable symptomatic improvement. No headache. Lumbar puncture results: Pressure 11. mm. Hg., Cells 191. Pandey four plus. Kolmer 44444, Kahn four plus. Lange 5555555555, Kolmer 5555444321.

December 5—Rapid symptomatic improvement. Revised diagnosis:

- (1) Gummatous Meningitis (?)
- (2) Syphilis of C.N.S.

December 6—Blood Kolmer 44442, Kahn four plus.

December 8—Lumbar puncture results: Pandey four plus, cells 120. Marked symptomatic improvement.

With timidity and almost apologetically, we call attention to the host of obscure cases diagnosed in retrospect, since retrospectively we become cognizant of the particular features resident in each of these cases which should have revealed their real pathologic significance. It is only too evident that the positive serology in the first case and its absence in the second served to confuse the diagnostic issue. Nevertheless, the fulminating character of Case No. 1, fulminating despite the antiluetic therapy, should have precluded the possibility that the meningeal symptoms were due entirely to syphilis, even though a positive diagnosis of tuberculosis could not be made. But with the diagnosis of syphilis on the shelf, the clinical and laboratory picture would permit no conclusion other than that of tuberculosis. In Case No. 2, syphilis was immediately suspected, but the diagnosis was abandoned upon return of the negative serology. Still the capriciousness of the symptoms and the length of duration should have been convincing evidence that the meningitic signs were not due to tuberculosis. Beyond a doubt the conflicting course of events in the first case was still too fresh in our minds, and served to overshadow the possibility of syphilis existing despite a negative Wassermann, a condition not uncommonly seen

in treated cases. It is interesting to note, that in the first case, not only the smears from the pellicle were negative, but also a guinea pig inoculated with the spinal fluid failed to develop tuberculosis and was discarded.

These cases, so far as laboratory analyses are concerned, more than substantiate the old aphorism, that "all that glitters is not gold", and upholds a contention repeatedly stressed by clinicians, that in cases where laboratory and clinical data conflict, it is much wiser and safer to rely most on the clinical impressions.

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POST ENCEPHALITIC SYNDROME

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In this group, composed of fourteen cases of similar mental and physical bases, are included those with a history of previous encephalitis, a history only of influenza which may have been an incorrect diagnosis, and those having a history of both influenza and encephalitis. While this condition is now widely recognized, yet compared with the number of cases of encephalitis which occur each year, a very small percentage only must develop this syndrome.

In all cases the physical and mental status was very similar. There seemed to be no predilection for any age, the cases being from thirteen to forty-seven years of age with a history of influenza, encephalitis, or both, from one and one-half to eight years previous—average, four years. Both sexes were equally represented; all were white; their occupations were various—physician, druggist, school-girl, laborers and housekeepers. The personality of the individuals previous to trouble showed no particular variation from the normal.

CONDUCT DISORDER

As a result of the central nervous system pathology, a distinct conduct disorder resulted. Individuals who were previously of a pleasant, industrious disposition, now became irritable, indolent, emotional, socially immoral, careless of personal appearance, quarrelsome, jealous, inefficient in their work, and showed poor judgment. They were frequently depressed, unable to concentrate, and often showed suicidal tendencies. Despondency in some cases

was quite marked; in some instances masturbation was practiced, and without any feelings of remorse. Others were critical, fault-finding, unreasonable; they were abusive to other patients, and at times were morose and profane. In all, mental retardation was quite apparent, and a slow but progressive dementia occurred. Calculation was very difficult and all actions were very slow. Prevarication, too, was much in evidence.

A number of the patients, particularly the females, frequently had pseudo-hysterical attacks, in which they fell to the floor and were apparently unconscious; these attacks lasted from a few minutes to a couple of hours. Some showed memory disturbances; in others the memory remained very acute. All would importune the physician frequently for release. Hypochondriacal conditions were frequent; one patient showed marked destructive tendencies and stole unremittingly. One individual had an illegitimate child; insight, except for occasional cases, was lacking. One realized her condition and desired to commit suicide to end it all.

The physical condition of the patients showed evidence of rather diverse central nervous system pathology, yet mostly confined to the prosencephalon and mesencephalon. There was mask-like expression, lack of associated movements of the arms when walking, spasticity and hyper-tonicity of extremities, and monotone voice, sometimes ending in crescendo and increasing in rate, were present in almost every case. Squint, particularly of the divergent type, with diplopia, was a common manifestation. Patients would sit for minutes at a time without blinking an eye. In one case an inability to converge was quite noticeable, and an occasional pupil irregularity was noted. There was poor vision, and one case showed conjugate vertical deviation of the eyes. In one case, complicated by lues, the pupils were contracted and immobile. Tremors of the face muscles, tongue, and of the extended fingers were frequent; asymmetry of the face was present in certain cases. Patients were slow in committing any motor act, and were also aware of the fact—it seemed to be a psychic inhibition as well as a motor retardation. Speech, in a number of instances, was defective, and coordination was poor. An occasional case showed tendency to run when walking. In addition, one case showed retraction of head with some degree of exophthalmos. Knee jerks

were usually found exaggerated as well as hyper-activity of most of the other deep reflexes. Vague pains in back, arms, legs, abdomen, and headaches, were frequent manifestations. Inequality of hand grip, awkwardness, and occasionally, difficulty in maintaining steady standing posture with eyes closed were very often observed. Stiffness and soreness in neck, weakness of one side, and ironing out of naso-labial folds were frequently noted. One individual developed motor weakness and a peculiar sagging, one-sided gait—examination revealed soreness over fourth lumbar vertebra and muscular weakness, but no other apparent local pathology. Vertebral scoliosis was found in a couple of cases. One patient showed marked pill-rolling effect—a few others showed this condition to a minor degree.

PATHOLOGY FROM CLINICAL SIGNS

From the clinical signs and symptoms we can obtain some information as to the location of the pathology. The decided change in behavior, the emotional instability, the social and immoral conduct, and the inability to maintain self or to do their usual work, etc., is evidence of malfunction or destruction of the frontal cortex and its thalamic connections. Again the vague aches and pains are best attributed to the thalamus, the primitive central sensory center. Degenerative processes in the lenticular and caudate nuclei (large cells) produce Parkinsonian movements, while disease of the midbrain affecting the nucleus of the third nerve and superior colliculi account for the strabismus, poor accommodation, conjugate vertical deviation, and pupil irregularities. Weakness of one side, incoordination of motor activities, exaggerated knee jerks, and defective speech may be cortical in origin, or due to interference with the association tracts of the brain. It is possible that some of the centers of the hind-brain may be involved to account for part of the clinical picture. Since none of these cases have yet come to autopsy, the exact pathology remains indefinite. Prognosis is, of course, practically hopeless. One case has recovered from the spasticity, only to be more troubled by soreness and pains. It is a chronic, slowly-progressive disease, some cases showing but very little deterioration in the past eight years.

SUMMARY

In this group of cases we have a pathological condition which was primarily the

result of the virus of encephalitis, or possibly influenza, manifesting itself in a disease process of the cortex, thalamus, basal nuclei, superior colliculi, nucleus of the third nerve, and possible interference with the association tracts and lower cranial nerve nuclei. The result is that the mentality is seriously impaired; they are no longer able to conduct themselves in a manner which is consistent with life outside of an institution. There is a slow but progressive dementia of the higher mental faculties; there is emotional instability, asocial and immoral conduct, strabismus with diplopia, Parkinsonian movements, muscular weakness, spasticity of extremities, muscular tremors, speech defect, poor coordination, and lack of associated arm movements when walking. There is also tendency to increase deep reflexes, and their countenance becomes mask-like.

TREATMENT

Scopolamine hydrobromide—1/100 grain morning and night—has proved effective in the majority of cases in reducing their tremors and in controlling their irritability, and in relieving hypertonicity. When removed from the drug they immediately request its continuance, since they seem to feel its beneficial influence.

While hydro- and electro-therapy have been used, all seemed to be of no avail. The patient's mentality is permanently affected. Since they prove to be a social problem, institutional care becomes necessary.

PERI-TONSILLAR ABSCESS IN INFANTS—REPORT OF CASE

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That peri-tonsillar abscess occurs rarely in infants is evident upon searching the literature for case reports. Eminent clinicians, of wide observation, affirm that this disease is rare in infancy and some say that they have never seen a case. Conversely retro-pharyngeal abscess is of more frequent occurrence in infants and many physicians have seen one or more cases.

The etiology is discussed in various text books, therefore there is no need to discuss it further here, as there is nothing new to add. Of reported cases, only one, that reported by Graef, was as young as the subject of this report.

Baby S., the first child of healthy parents, was delivered normally, September 13, 1927. He was breast fed. He has always been over weight, because of over feeding. At the beginning of the present illness he was two pounds over the standard weight for his age. His health was good until the present sickness began. Because of fever, refusal to take the breast and restlessness I was called to see him on March 15, 1928. Upon examination he was found to have a rectal temperature of 102°F., slightly enlarged tonsils with the area surrounding them inflamed. Two days later a gastro-enteritis of moderate degree developed.

On March 20, there was a cervical adenitis with the greater swelling at the angle of the right jaw. The head was retracted to the right and backwards. The breathing was difficult and through the open mouth and there was some cyanosis. Examination of the throat revealed the right tonsil with the surrounding area greatly swollen, dark red and pushing the uvula forward and to the left, and to the palpating finger the mass was hard.

There was no change in the condition for the next two days, but on the morning of March 22, the mass was found to be fluctuating. It was then incised with a free drainage of about 20 c.c. of pus. After the mass was incised the fever became normal, he then took the breast on the same day and completely recovered within a few days. During the entire course of the sickness the fever did not go over 102°F.

REVIEW OF LITERATURE

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FOCAL INFECTION

J. G. R. MANWARING, M. D.

FLINT, MICHIGAN

The theory of focal infections is still on trial. A portion of its value must consist in the results obtained following the removal of such infections. This is to a large extent poorly carried on at present with consequent disappointments. The occasion for this failure to find and eradicate such centres of infection seems to be due to a lack of understanding as to how to examine and what to look for.

An early arthritis deformans, infectious nephritis, iritis, retinitis, etc., are all serious enough to demand such an examination as is here outlined and proper corrective measures applied to all such foci found. Until this is done no one has a right to disparage his results in treatments of this kind.

We have come to note the following:

1. Skin: Acne and Furunculosis. In acne of the back, the axillary nodes are enlarged and may be noticed before the back is inspected.

2. Ears: History of chronic discharge, intermittent discharge and deafness. These call for a speculum examination.

3. Eyes: History of epiphora or pus in the eye mornings. Pressure on lachrymal region causes pus to appear near inner canthus.

4. Nose: History of blowing blood or pus from nose. History of Sinusitis. Look for purulent post nasal discharge in pharynx and ulcer or pus in the nose anteriorly. This can readily be done in routine work with a good flash light as the patient is lying down. Seldom is a speculum used.

5. Tonsils: History of sore throat, often very mild. Look for redness of pillars and surface of tonsils. The size of the tonsil is of little importance. If the pillars are redder than the rest of the region the tonsils are infected. This red edge along the pillar has been called the tonsillar halo. If narrow and sharp it has been thought to indicate a strep. infection, if broad and fading out gradually it has been thought to be staph.

A noted surgeon once said that if the "head man" says the tonsils look all right, they take them out for they are the worst kind.

6. Teeth: History of removal of pulps and canal fillings. Crowns, bridgework, etc., may of themselves indicate "dead" teeth. Rosenow states that of thousands of such teeth which have been split and examined, none was free from infection after being pulpless two years or more. Some dentists no longer "devitalize" teeth. They fix them otherwise or remove them. Look for "gum boils" and fistulae which indicate deep infection. Pyorrhea reddening of the thin gum margin, the retraction of this margin, the evidence of pus on pressure should be looked for. Extensive necrosis of the teeth themselves is often of no importance.

Enlarged cervical lymph nodes point to infection of some part of the head usually.

7. Gall bladder and appendix are investigated in routine examinations now and are not apt to be overlooked.

8. Skene's Glands: A pouting of the posterior urinary meatus usually is due to suppuration of Skene's Glands and is not necessarily

gonorrhea. Sometimes there is redness or granular mucosa around the orifices. Pressure from behind will squeeze out pus unless the patient has removed it by scrubbing or the doctor by pressure during a bimanual examination. The glands may best be found with a fine silver ear probe. They vary from two to five in number. This is the most often overlooked source of infection.

9. Bartholin's Glands: The ducts lie to the outer side of the posterior end of the inner labia and are at once seen if reddened. (Macule of Sanger). The glands are farther posterior and pressure running forward will bring out the secretion when pus may be noted. The gland can be palpated for enlargement.

10. Cervix Uteri: History of thick mucopurulent vaginal discharge. Backache and pelvic aching often occur. The normal endocervical discharge is clear as egg white, when cloudy it means infection. Look for swelling, ectropion of the lining and Nabothian cysts which feel like shot under the mucosa, all of which mean infection.

11. Fallopian Tubes: Salpingitis is well understood and usually examined for now. It needs no especial mention.

12. Seminal Vesicles and Prostate: History of deep urethritis, epididymitis, irritable bladder, dysuria all call for examination of the vesicles and prostate. Even with no symptoms they often should be investigated. Examine for swelling, irregular consistency or unusual tenderness. Expressed fluid should be examined for pus.

13. Urinary tract: Pyelitis, though itself secondary, may become a focus for dissemination of infection. This is a familiar disease and will not be gone into.

14. Anal region: History of pain with defecation, pruritis or bloody stools point to a lesion near the anus. Fistulous openings in the skin should be looked for. A small papule may indicate such an opening. An indurated tract toward the anus can often be felt. The Crypts of Morgagni should be examined for redness and pus. Sometimes the induration of a fistula can be felt by digital examination. Anal ulcer is easily found when attempts at examination are made. —From the Genesee County Medical Society Bulletin.

WILLIAM HARVEY TRICENTENARY

The whole scientific world will this week celebrate the birth not of a man, but of a book, quite a small book, called "De Motu Cordis et Sanguinis." It was not longer than what we should nowadays call an essay, and its contents seem as simple as its title. It describes facts which now form the subject of diagrams on the walls of elementary schools. Yet it is one of those few books that have moved the earth by its effect on the minds of men. It rescued not merely medicine, but all biological science from the grip of tradition and "authority."

The enormous impetus it gave to human thought and progress is comparable with the work of only very few individuals, and it touches all of us more directly and intimately than that of the mathematicians and astronomers, or even such directors of thought as Bacon. Prior to the work of Harvey there had been no real advance, except in details, for some three thousand years. Even the lapse of one generation would have

meant a retardation of knowledge in geometrical ratio. For Harvey did more than demonstrate the details of the circulation. His was an early demonstration of the practical value of the inductive method of reasoning, of the essential value of experiment and observation. And he smashed forever the idea of "authority" in science.

ARTERIES "AIR TUBES"

Since the days of Galen it had been accepted that the blood ebbed and flowed to and from the heart. It picked up nourishment from the liver, it picked up air from the lungs. It went backwards and forwards in the body through the veins. Air from the lungs somehow got mixed up with blood. The arteries somehow "conveyed air" to the body, and with this air they conveyed "vapours" and "spirits", which became one axiom of a hopelessly false pathology. Thus, as anatomy advanced, physiology and medicine remained hopelessly at a standstill. Empirical theories of "concoction" of the blood in various organs were needed and believed for generations. The whole business depended on the passage of "some of the blood" direct from the left to the right side of the heart. The possibility of this had been challenged and even disproved. But even to Fabricius it must have seemed that it did happen, though he could not demonstrate it, because how else could the Galenic doctrine be true?

TRUE FUNCTION OF ARTERIES

But to Harvey nothing was true that was not demonstrated. He first asked himself, "Why are there valves in the veins?" He discarded the idea that they were "windows" admitting mystical substances to the tissues. He convinced himself that they assisted the return to the heart of the same blood that had left the heart. He proved that the arteries conveyed blood from the heart, not air or "vapours" as had so long been assumed by the anatomists. He worked out the mechanics of the heart as a pump with the necessary valves, and demonstrated the circulation through the lungs, emanating from the right side of the heart, and returning to the left side, and its propulsion thence throughout the body. He showed that the same blood must be returned by the veins. But he was not able to demonstrate the channel of communication. One can imagine him asking himself, "Is there a fallacy here as bad as the old nonsense about the blood going direct from one side of the heart to the other, which I have proved to be impossible?"

HARVEY'S OPPOSITION

To the physicians of that day Harvey's theory was as disturbing, as revolutionary as must have been the notion that the earth revolved on its axis to people who, guided by their senses, regarded it as the immovable center of the universe. Harvey's theory was indignantly repudiated by the great "specialists" of his time.

But he was not subjected to the persecution that usually awaits the pioneers of thought. He died honoured by his profession and by mankind. Some four years after his death the great microscopist, Malpighi, demonstrated the "capillary circulation," the "missing link" in Harvey's theory.

It is natural to wish that Harvey could have lived to see this technical development. But to his mind it would have been but a detail. He must have known that he had proved his case. It is very unlikely that he realized that he had founded a new school of physiology, and medi-

cine, or that his work had proved him one of the greatest benefactors of humanity.—From the Manchester Guardian.

ECONOMIC WASTE FROM CANCER DEATHS

Cancer costs on an average \$1,000 per case for medicine and nursing alone. Multiply this by 110,000, the number of cancer deaths in the United States last year, and there results an annual cancer bill of \$110,000,000 according to statistics compiled by Dr. Louis I. Dublin of the Metropolitan Life Insurance Company. When the economic value of the victims is computed from the actual dollars and cents earning capacity of the various age groups, cancer losses run up to over \$680,000,000 annually, a figure that Dr. Dublin has estimated equals a tenth of all the iron and steel manufactured in the country every year or all of the current income of the state of Louisiana. This plus the sickness costs brings the grand total up to \$800,000,000. "If we had that much money loss every year through other forces of nature we would get busy and try to prevent it," declared Dr. Dublin. "Expert engineers and others would be asked to concentrate all their faculties on the problem; but with matters of human life we are not so careful nor so anxious. . . . We must organize agencies of research on a grand scale. Then the monster of cancer will surely, in time, be brought under control, just as the menace of other diseases has been."—Science Service.

VALE, CHIROPRACTIC

That chiropractic should have gone on the rocks was inevitable. Sooner or later the same fate will await all of the medical cults which exist as short cuts to the practice of medicine. In a recent Philadelphia address, to a group of his followers and dupes, B. J. Palmer, the originator and high priest of the chiropractic cult, sang his own swan song, announcing that he was done with this form of practice and thenceforth the thousands of chiropractors whom he had fostered and launched on their careers, will be forced to shift for themselves without the support of their great leader and prophet. His explanation has been obvious from the outset to anyone of ordinary intellect. These cultists, whom he has developed and instructed along a single line of treatment, soon found this narrow gauge course inadequate, and, as the peerless leader has stated, they ventured the attempt to practice medicine en masse. He attributes the debacle to the passage of the basic science laws, inspired largely by their existence. States having this means of discriminating between knowledge and ignorance have thus barred their entrance for practice. He states, furthermore, that the supreme courts in seven states have handed down injunctions whereby they are lost forever to chiropractic. The only sop which he offers to the mourners is that by suitable education they may yet be enabled to enter the ranks of medical practitioners. Personally he is not concerned. Having amassed a fortune by commercializing on a grand scale his own medical "discovery," he does not propose to waste more money in an attempt to bolster a hopeless cause, and forthwith proclaims he has quit. Thus ends this bizarre excursion in treatment of human ailments which within recent years has attracted quite an army of followers. Vale, chiropractic!—Northwest Medicine.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner*

Because of the unusual prevalence of rabies among animals in several sections of the state, a general warning has been sent by the State Department of Health to all mayors and village presidents. The letter urges close supervision of dogs in an effort to prevent a corresponding increase in the number of cases of rabies among humans.

In order that physicians may be fully informed on the situation, we reprint the letter, together with the regulations of the department in regard to rabies that were sent with it. The co-operation of physicians is earnestly requested in making these facts generally known in their communities.

"To all Mayors and Village Presidents:

"For some months rabies has been far more prevalent in this state than is usual. Past experience has shown conclusively that an increase in the prevalence of rabies in animals is soon followed by the occurrence of cases of rabies in humans.

"The State Department of Agriculture has the responsibility of the control of rabies among animals. Twenty counties have been placed under quarantine by the State Department of Agriculture to prevent the spread of the disease at this time. Dogs being carried about the state in automobiles may transport the disease to communities where it has not yet appeared.

"It is essential for the protection of the health of the people in all communities of this state that the enclosed simple directions be followed, in case of dog bites or any other exposure to rabies.

"Rabies is a disease which is spread by the saliva of the infected animal. Before the disease can be spread to another animal or person this saliva must be inoculated under the skin of the animal or person. This is usually done by the biting of a rabid dog, because the dog usually attacks by biting.

"In addition to the protection that can be had by official action, each dog owner has a very definite responsibility. If each dog owner will keep his dog under close supervision at his own home, the opportunity for the dog to contract rabies will be very much diminished. The stray, unlicensed dog is the greatest menace in

rabies. Police officers should capture all stray, unlicensed dogs, and dispose of them according to law.

"During an epidemic of rabies among the animals of a community, the public is facing a serious situation. Proper, prompt, and cool action on the part of public officials will do much to prevent hysteria on the part of the public.

"Very truly yours,

"Guy L. Kiefer, M. D.,
"Commissioner."

IN CASE OF DOG BITES

What to Do with the Dog—

1. Do not kill the dog unless it is necessary to effect capture.
2. Secure the dog with a light chain or wire.
3. Keep the dog in a comfortable place.
4. Treat the dog kindly, he is probably sick.
5. Give the dog plenty of food and drink.
6. Make sure that the dog does not escape.
7. Keep children and inquisitive adults away.

If the dog is alive after ten days, he was not rabid.

If the dog dies within ten days—

1. Cut off the whole head.
2. Put in a tin pail with a cover.
3. Pack this pail in the middle of a wooden candy pail or box of similar size with three-fourths sawdust and one-fourth ice.
4. Ship at once by express to Pasteur Institute, Ann Arbor, Michigan, with letter giving full details.
5. The Pasteur Institute will give the further directions.

If the dog must be killed to effect a capture—

1. Do not damage the head in any way.
2. Cut off the head, pack and ship it as described, at once.

What to do with the person bitten—

1. Take the person to a physician at once to have the wounds cauterized. Fum-

ing nitric acid or full strength formaldehyde are the only effective means of cauterizing these wounds. This is of especial importance if the wounds are on the face or hands.

General Considerations—

1. When you have a dog under observation for a ten-day period, it is essential that you know that the dog you have is the dog that did the biting.

2. In case of any dog bite where it cannot be proved that the biting animal was not rabid, it is advisable to start Pasteur treatment at once.

LABORATORY NOTES

A limited supply of scarlet fever streptococcus antitoxin for therapeutic use is now available to Michigan physicians. The Department of Health will distribute, free of charge upon telegraphic request, antitoxin for the treatment of cases of scarlet fever.

The development of the process of manufacture of products for the prevention and treatment of scarlet fever has been carried on since the legislature made the appropriation for the Biologic Products Division of the Bureau of Laboratories, so that, on account of insufficient funds, we are unable to make a general distribution of scarlet fever antitoxin. When funds are available, scarlet fever antitoxin will be distributed without restrictions as we do diphtheria antitoxin. Within the limits of our resources, however, we will supply scarlet fever antitoxin to all those who request it.

Occasionally physicians request a Wassermann test run on blood specimens sent to the laboratory. Since January of this year the Lansing laboratory of the Michigan Department of Health has had requests for perhaps one hundred Wassermans, an extremely small proportion of the 41,221 Kahn tests run during the same period of time. On checking up with physicians, it is found that they frequently use the name for serum diagnosis of syphilis without any desire for the special Wassermann test. Eight Wassermans, requested since January, have been run. There was no variation between the Kahn test and these eight.

The Bureau of Laboratories of the Michigan Department of Health, therefore, announces that the Wassermann test will be run *only* on the first three days of each month, and that the Kahn test will be run daily as at present. If a physician

has a patient on whom he wishes a Wassermann test as well as a Kahn test, he should send in the blood specimen on the last day or two of the month and it will be run with the Wassermann method the first of the following month.

ROADSIDE WATER SURVEY STARTS

The summer program of inspecting and testing roadside drinking water supplies was started on Monday, May 21, when a representative of the Bureau of Engineering left Lansing for the southeastern part of the state. From there the main trunk lines of the state will be systematically covered and careful check made of all drinking water sources that might be used by highway travelers. A second man will leave within a short time, and it is hoped that a third can be put on the road later, so that the entire state can be covered during the tourist season.

Safe supplies will be posted with a metal sign this year as usual. Individual supplies will have a yellow and black sign and approved municipal supplies will be designated by an orange and black sign.

SANITATION AT CAMP GRAYLING

Plans and specifications for an extensive new sewerage system and for improvement in the water supply at Camp Grayling have been approved by the federal government and bids on the construction will be received within a short time. Colonel E. D. Rich, Director of the Bureau of Engineering, accompanied by Colonel Leroy Pearson, Quarter Master General of Michigan, made a special trip to Washington with the plans to insure prompt action.

Contracts to be let will total between \$50,000 and \$75,000. Active operations will start at the close of camp in the fall, and will be under the general supervision of the Bureau of Engineering.

CHANGES IN PERSONNEL

Dr. Paul F. Orr left the staff of the Bureau of Epidemiology on May 1st to become Commissioner of Health of the city of Toledo.

Dr. Robert Stark has been appointed to fill the position left vacant by Dr. Orr. Dr. Stark graduated from the University of Michigan in 1910 and for two years was at the Pasteur Institute in Ann Arbor. He served as director of laboratories of the State Department of Health of North Dakota, returning to Michigan to practice medicine in Allegan.

Last year Dr. Stark took the course in rural health work at the school in Greenville, Ohio, conducted by the Rockefeller Foundation.

CHILD HYGIENE ACTIVITIES

The women's classes in prenatal, infant and child care that have been held in Presque Isle county are just being completed, and Dr. Ida M. Alexander, who is in charge of them, goes to Iron county, where she will conduct a similar series of classes. Dr. Alexander is substituting for Dr. Rhoda Grace Hendrick, who is on three months' leave of absence.

Child care classes are being terminated in the rural schools of Muskegon and Jackson counties. Similar classes have just ended in Menominee county. The nurses who have been conducting these classes will spend the summer months carrying on breast feeding campaigns.

Physicians have already been visited in Montcalm, Crawford and Menominee counties and have expressed their approval of having breast feeding surveys conducted in their counties. The nurses assigned to this work will make home calls on the mothers of young infants. Miss Martha I. Giltner, who has had charge of child care classes in the rural schools in Menominee county, has left for a two weeks' vacation, during which time she will attend the biennial meeting of three national nurses' associations at Louisville, Kentucky. Upon her return to Menominee county she will conduct the breast feeding campaign there. Arenac county is already having a breast feeding survey, carried on by Esther Nash, nursing director for the Lower Peninsula.

MOUTH HYGIENE WORK

Seventeen localities in the state were visited by the Director of the Bureau of Mouth Hygiene, and 27 addresses were given before schools, parent-teacher associations, medical and dental societies and general audiences, during May.

The need for mouth hygiene activities was demonstrated in 14 different towns by examining one school room in each town in the presence of teachers, parents, health workers, and others interested.

Towns visited during the month include Holland, Grand Haven, Grand Rapids, Dearborn, Algonac, Hart, Allegan, Ithaca and Saginaw. In the four places named last, the group before which the talk and demonstration was given was the County

Normal students. This is an especially important group from the standpoint of progress in the rural schools, since most of the teachers in the country schools are trained in the county normals.

TOURIST CAMPS AND PICNIC GROUNDS

With the rapidly increasing use—and number—of tourist camps and picnic grounds has come the problem of their proper regulation from a sanitary standpoint. Rules governing such camps have been prepared by the department and printed in placard form for convenient posting. This placard is being sent to all mayors in the state, with a letter explaining the enforcement of the regulations.

Because of the importance of the matter both from a health and a resort standpoint, we quote from the letter to mayors, and reprint the very simple regulations. The quotation shows the interrelation between state and local authorities in enacting and enforcing the rules.

"You will receive in this roll a placard prepared by the Michigan Department of Health and approved by the State Advisory Council on Health. This placard carries the rules and regulations of this department concerning tourist camps and picnic grounds.

"These rules and regulations are to be enforced by your own police officers if the camping ground is in your city limits, or by deputy sheriffs or special officers if outside of your city limits. If you would like more of these placards to post in your tourist camps or picnic grounds, they will be furnished you on request.

"It is the desire of the Michigan Department of Health to make this state a desirable place for summer tourists. If they find neat, clean tourist camps and spend their summer vacation with us without contracting any sickness, they will come back and bring their friends with them."

REGULATIONS FOR THE SANITATION OF TOURIST CAMPS AND PICNIC GROUNDS

The following regulations apply to any place offered to the public for the above mentioned purposes. Persons finding these premises in insanitary conditions should report the facts to the mayor, village president or supervisor, the local health officer, or to the State Department of Health.

SUPERVISION AND EQUIPMENT

1. At least one attendant shall be provided who will have the full responsibility

of the carrying out of these rules, and such other duties as assigned to him by proper local authority.

Police officers should visit the tourist camp as a part of their regular tour of duty.

2. Each tourist camp shall be equipped with an incinerator or other suitable device for the burning of paper, litter and refuse.

3. It shall be a part of the duties of the attendant that once each day during the season a fire be built and all paper, litter and refuse incident to the use of the place be collected and burned.

WATER SUPPLY

1. A clean, wholesome supply of water must be available at all times. Open springs are not advised unless they are located or constructed so as to prevent pollution from the surface of the ground.

2. Laboratory and field studies shall be made of the water.

3. Any unsafe water supply within the camp or in its immediate vicinity, shall be kept conspicuously placarded, warning against its use for drinking or culinary purposes.

TOILETS

1. Some approved type of sanitary toilets must be provided.

2. These must be adequate in number, separate for the sexes and kept clean at all times.

3. These toilets shall always be of the waterflush type when water and sewer are available.

4. Where the water, but not the sewer is available, waterflush toilet shall be connected with septic tanks. Designs of approved septic tanks are available free of cost of the State Department of Health.

5. Pit privies will be allowed only:

(a) Where neither water nor sewer are available.

(b) When located in a proper place, and

(c) When kept scrupulously clean.

(d) When the pit is (1) deep, (2) dark, and (3) fly tight.

6. The location of all toilets shall be indicated by appropriate signs.

GARBAGE AND REFUSE

1. Receptacles for papers, litter, refuse, boxes, etc., shall be furnished in adequate size, adequate numbers, and in

adequate locations. These receptacles shall be emptied and the contents burned daily by the attendant.

2. All garbage must be carefully wrapped in paper and deposited in the receptacles provided for this purpose, by the people using these grounds.

3. All garbage receptacles must be kept clean and emptied daily. The garbage must be disposed of in such a manner that its disposal does not cause a nuisance.

4. When the attendant finds campers wilfully or carelessly littering these grounds or abusing any of these facilities in any manner, he shall exclude them from the grounds.

PERSONAL SAFETY

1. For personal safety, tents should not be placed less than ten feet apart.

PENALTY

These rules and regulations have been adopted by the Advisory Council of the Michigan Department of Health. Violation of any of these rules, by individuals or counties, cities, villages or townships is a misdemeanor and punishable by law.

VISITS OF ENGINEERS DURING THE MONTHS OF APRIL AND MAY, 1928

Inspections of Railroad Water Supplies: total, 52.

Adrian	Hillsdale
Ann Arbor	Ionia
Bad Axe	Jackson
Battle Creek (3)	Ludington
Benton Harbor (3)	Mackinaw City (3)
Cadillac (3)	Marshall
Caro	Muskegon (3)
Caseville	Mt. Clemens
Cass City	Niles (3)
Detroit (4)	Port Austin
Flint (2)	Port Hope
Grand Haven (2)	Port Huron (3)
Grand Rapids	St. Joseph (3)
Grayling	Taylorville

Inspections and Conferences, Sewerage and Sewage Disposal: total, 57.

Bay View (2)	Muskegon Hts., (2)
Benton Harbor (3)	Mt. Clemens (2)
Birmingham (2)	Mt. Pleasant
Cadillac (2)	Niles
Coopersville	Nine Mile Road
Comstock Park	North Muskegon
Dowagiac (4)	North Park (2)
E. Grand Rapids (2)	Petoskey
Fremont (6)	Roseville (5)
Gladstone	Saginaw (2)
Grayling	South Haven
Holland (2)	St. Joseph
Ithaca	Whitehall
Lansing (4)	Williamston
Mackinaw City	Zeeland
Muskegon	

Inspections and Conferences, Water Supplies: total, 21.

Ann Arbor	Pearl Beach
Benton Harbor	Rockford
Berkeley	Saginaw
Center Line	South Haven (2)
Dundee	Utica (7)
Grayling	Williamston
Jackson (2)	

Inspections and Conferences, Stream Pollution: total, 14.

Adrian	Kent City
Benton Harbor	Niles
Blissfield	Rockford
Dowagiac (3)	South Haven (2)
East Lansing (2)	St. Joseph

Inspections and Conferences, Swimming Pools: total, 8.

Hamtramck	Lansing
Highland Park	Pontiac (4)
Jackson	

Inspections and Conferences, Miscellaneous: total, 16.

Ada, School Sewage Disposal
Attica, Sewage Treatment for New School.
Bath, Drainage Nuisance.
Detroit, Methodist Children's Home.
Jackson, Sanitary Inspections.
Lansing, Sewage Disposal for Private Utilities.
Lansing Twp., Drainage Nuisance.
Port Huron, Water Supply, Young Women's Hebrew Association.
Rockford, Proposed Rendering Works.
Roseville, 11-Mile Highway Drain.
Salem, School Well.
Salem, Private Well.
South Haven, Sewage Complaint (3).
Williamston, Sewer Nuisance.

Conferences and Inspections, Institutions: total, 4.

Genesee County Poor Farm, Sewage Disposal.
Grayling, Survey for Water and Sewer Systems (76 days on survey at Camp Grayling).
Jackson, Sewage Disposal at State Prison.
Saginaw, Water Supply St. Vincent's Orphanage.

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health
May, 1928

	+	—	+—	Total
Throat Swabs for Diphtheria.....				970
Diagnosis	19	247		
Release	77	237		
Carrier	7	365		
Virulence Tests	7	11		
Throat Swabs for Hemolytic Streptococci				577
Diagnosis	122	83		
Carrier	82	290		
Throat Swabs for Vincent's.....	36	230		266
Syphilis				8099
Kahn	1210	6835	50	
Wassermann		3		
Darkfield	1			
Examination for Gonococci	140	1269		1409
B. Tuberculosis				610
Sputum	85	465		
Animal Inoculations	5	55		
Typhoid				117
Feces	2	42		
Blood Cultures	2	24		
Widals	4	33		
Urine		10		
B. Abortus	4	19		23
Dysentery				29
Intestinal Parasites				17
Transudates and Exudates				289
Blood Examinations (not classified)				154
Urine Examinations (not classified)				346
Water and Sewage Examinations				382
Milk Examinations				99
Toxicological Examinations				9
Autogenous Vaccines				1
Supplementary Examinations.....				186
Unclassified Examinations				560
Total for the Month				14143
Cumulative Total (fiscal year)				147693
Increase over this month last year				1847
Outfits Mailed Out.....				16865
Media Manufactured, c. c. (Special)				179485
Typhoid Vaccine Distributed, c. c.				2930
Diphtheria Antitoxin Distributed, units				24005000
Diphtheria Toxin Antitoxin Distributed, c. c.				21610
Silver Nitrate Ampules Distributed				11028
Examinations Made by Houghton Laboratory				2026
Examinations Made by Grand Rapids Laboratory				7611

PREVALENCE OF DISEASE

	May Report		May 1927	Av. 5 Yrs.
	April 1928	May 1928		
Pneumonia	1,068	1,127	526	581
Tuberculosis	517	560	506	594
Typhoid Fever	23	17	24	34
Diphtheria	230	323	381	357
Whooping Cough	581	619	751	657
Scarlet Fever	1,080	1,176	1,103	1,193
Measles	6,212	4,769	1,175	4,135
Smallpox	132	88	188	236
Meningitis	22	23	6	13
Poliomyelitis	1	4	0	2
Syphilis	1,121	1,028	1,325	1,049
Gonorrhea	558	376	674	716
Chancroid	6	5	0	6

SMALLPOX CASES SHOW INCREASE

show that there are 250 more cases in the last reliable figures of the U. S. Public Health Service Smallpox is on the increase. The latest availing corresponding week of last year. In spite of the fact, however, that smallpox is more prevalent this year in the country at large, it has just been reported to the American Medical Association that not a single case of the disease has been contracted in the public schools of St. Louis, Mo., for 33 years. Systematic vaccination with subsequent inspection and reinspection of vaccinations on the part of the city division of health and the hygienic department of the public schools are considered the agents that have made possible this remarkable record—Science Service.

THE JOURNAL

OF THE

Michigan State Medical Society

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JULY, 1928

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

THE POST-GRADUATE CONFERENCE

Over a thousand physicians met in Detroit to attend the Post-Graduate Conference which took place May 14th to 17th inclusive. The Conference was a marked success from every viewpoint. The program was carried out as announced in the May number of this Journal. It consisted of some of the best medical and surgical talent both within as well as outside of the State. There were approximately sixty subjects presented, a number as prepared and a few as oral addresses. The readers of the Journal will have an opportunity during the coming months to go over a number of the addresses at their leisure, as it is our endeavor to assure permanency for as many as possible of these able medical and surgical dissertations.

The attendance as anticipated was good. There were between eight and nine hundred registrations and it was estimated half as many more attended who did not register. The speakers were as enthusiastic over this new venture as were their audiences, which is saying a good deal.

Much credit is due the local committee

of the Wayne County Medical Society, who were largely responsible for the arrangements, and particular mention is made of Dr. George Van Amber Brown, the president of the Society, who had been untiring in his efforts to make the Conference a success.

PHYSICIANS AS LEGISLATORS

Legislatures of almost every civilized State are apt to have a plethora of lawyers as members. We know none in which physicians form a noticeable contingent. This is largely due to the fact that physicians are prone to avoid such positions. This is unfortunate in as much as there is no class of men better qualified by training and experience for legislative positions. Why? Because in the first place a great deal of legislation, particularly State legislation, has to do with the problems of preventive medicine and sanitation, and secondly the individualistic character of the physician puts him in a position to view impartially the rights and privileges of others. No farmer for instance could represent his class more satisfactorily than a doctor who had practised a number of years in a rural community. And yet for reasons that may be perfectly obvious we have very few of such men as members of the legislature.

The refusal to represent the people calls to mind an interesting phase of the early history of parliamentary government. Parliaments were forced upon the people and did not represent in the beginning a demand on the part of the people at large for a voice in the affairs of State. The first parliament extended to everyone the privilege to attend and to assist in the deliberations of government. This was found unsatisfactory and resulted in the substitution of representatives for the community or constituency at large. These representatives looked upon the matter of attendance on parliament about the same as the average culprit or witness looks upon attendance at police court. Accordingly the command to attend parliament read more like a summons to a modern justice court. In fact two representatives of Oxfordshire, England, fled the country rather than attend parliament and were thus declared outlaws.

So much for the bit of history. It would appear at the present time in this State that a number of members of the medical profession should be prevailed upon emphatically at least to allow themselves to stand for election to the Michigan State

legislature. We have in mind a number we would like to draft if that were possible. There is no question but the presence of a number of physicians would add material strength not only to committees on health but to other matters of State as well.

JOSLIN'S IDEALS IN DIABETIC TREATMENT*

Elliot P. Joslin sets forth his ideas in the treatment of the diabetic. As yet we have not an ideal treatment for this disease, inasmuch as we cannot offer any hope of a cure. The first thought should be that while seeking to help the patient any measure should be avoided which might increase complications or in any way jeopardize the patient's chance for a normal span of years.

There are in general use three methods of diabetic treatment: first, a high carbohydrate and low fat diet as used by the normal individual, and which, when given to the diabetic must be accompanied by large doses of insulin; second, the low carbohydrate and high fat diet which for some years past has been in great favor (with the doctors; not with the patients) third, a moderate amount of carbohydrates and fat in the diet even if insulin must be given to keep the patient sugar free. The author has long been opposed to a high fat diet and after a great deal of clinical observation and much research is now bringing forth evidence to support his views. Joslin is convinced that a high fat diet by increasing the blood lipoids will produce a premature vascular sclerosis.

Due to a judicious use of insulin the diabetic of today is being saved from the complicating acidosis and coma which so frequently proved fatal to the patient of a few years ago. For this reason there are many patients who have lived with diabetes for ten to fifteen or more years and we are now able to draw some fairly sound conclusions as to the factor of diet on this condition. The great complication of diabetes is no longer coma but arteriosclerosis, and this condition is more frequent in the diabetic than in the non-diabetic. We must now turn our energies to the prevention of this condition.

The author stresses the necessity of maintaining a proper weight for age and height in preventing the development of arteriosclerosis. He thinks diabetes most commonly begins from excess of fat in the tissues and in the diet. In this paper he also takes a stand against the large doses

of insulin so frequently employed. He favors the small frequently repeated doses. His ideals for the youthful diabetic include a vacation in a camp for diabetics only where there will be no diabetic temptations and where there will be opportunity for supervised sports. It is surprising how the toleration for carbohydrate increases when proper environment is supplied.—L. F. C. W.

EXIT QUACKERY

Probably that is too much to expect in this day and generation. The daily newspapers a month ago featured accounts of police raids on advertising medical offices in Detroit and it was stated that this illegitimate traffic in the fears and frailties of deluded men and women was more or less prevalent in this and other states. This is a matter which does not concern the medical profession any more than it does any other class of people in the State. It is an evil that calls for correction and the law enforcing authorities are the ones properly to deal with it. The medical profession has done and it doing its best to enlighten the lay public of the State in such matters that should lead them to shun the quack. This is not the only evil with which people unknowingly contend. In the same class we have electric belts and other devices that are advertised in the public press and which delude the confiding public.

The radio has not been above suspicion in regard to some of the material broadcasted, but it is perhaps too young to have developed any special ethics. Quackery thrives on publicity whether it is newspaper, radio or pamphlets thrown from door to door.

RADIOLOGICAL FRAUDS

From the reports of Radiologists from various parts of the United States and Canada, the feeling is justified that this specialty is threatened by more or less serious dangers. There are complaints of fee-splitting under various disguises; then there are commercial laboratories without a qualified radiologist in charge. Some employ physicians as figure-heads, who are supposed to pass upon cases coming to the clinic but who actually do not. To protect and safeguard the specialty of Roentgenology a committee of the Radiological Society of North America after investigating complaints made, drafted resolutions to the effect that:

(1) Radiological diagnosis is a consulting spe-

* New England Journal of Medicine, April, 1928.

cialty of medicine, the chief function of which is to aid practitioners of other specialties and of general medicine in the diagnosis and treatment of disease; (2) That it is improper and unethical for any radiologist or any organization practising radiology to offer discounts or commissions, or other financial inducements, to attract patients either directly or through reference by other physicians; (3) that it is unethical for any radiologist or organization practising radiology to make charges referring physicians for services rendered, but that all such charges must be made against the patient for whom such services are rendered; (4) that a commercial X-ray laboratory is defined as one which advertises to make radiographic or fluoroscopic examinations for physicians and surgeons for the avowed or apparent primary purpose of financial gain; (5) that it is improper and unethical for any radiologist to become affiliated with a commercial X-ray laboratory; (6) that a stock company or corporation with physicians and surgeons as stockholders, offering dividends as an inducement to refer cases to a laboratory owned and operated by such company or corporation, is unethical, and that such dividends be regarded in the same light as commissions or discounts. A group of physicians may properly own and operate an X-ray department or laboratory, providing the earnings therefrom are employed for the advancement of the science of radiology or other branches of medicine or the maintenance and improvement of service to patients, but not as an inducement to stockholders to refer cases in the hope of receiving greater dividends.

Radiology is one of the most highly specialized departments of medicine. It calls for a working knowledge of both normal and pathological structures from the viewpoint of density; it also demands acquaintance with the physics of high tension currents and electrical phenomena. A physician is poorly equipped as a radiologist if he is unfamiliar with the biological action of the X-rays and radium.

The radiologist is a consultant not only to the surgeon but the internist as well, and this includes almost all the surgical and medical specialties. His relation to the patient is of such a kind as to call for a personality of a peculiarly ideal type. He must observe the dignified ethical relations that should always obtain between consultant and referring doctor and at the same time gain the confidence of the patient.

In tribute to the specialty of radiology, Dr. W. J. Mayo has declared that, "Neither the microscope nor the ultra-microscope has given visual knowledge with regard to the internal structure of the human body. Necropsy reveals the terminal changes that cause death, not necessarily the nature of the lesion during life. Surgical operation has greatly advanced our knowledge of the pathology of the cranial, the thoracic, and the abdominal viscera, but often is resorted to only when the disease

is so far advanced that the knowledge gained comes too late to be of use to the patient.

"Radiology has come to our aid in the elucidation of internal disease processes and has proved to be one of the greatest blessings vouchsafed to mankind. It affords wide knowledge in the early stages of disease conditions of the viscera, the bones, and other structures. While radiology is highly specialized, the fruits of the labor of the radiologist as concerns clinical conditions should be put in the hands of every man who practises medicine."

PEPTIC ULCER*

To operate or not to operate; that is the question. Perhaps on no other topic has there been so much written within recent years as gastric or duodenal ulcer, unless it be on malignancy. Reginald Fitz writing in the *New England Journal of Medicine* (formerly the *Boston Medical and Surgical Journal*) puts his subject in a very pointed way: "What Would You Do if You Had a Peptic Ulcer?" The problem of the best treatment of these cases according to this writer, is at present unsettled. "One hears surgery recommended, and listens to warm supporters of operative procedures like pyloroplasty, gastroenterostomy or even subtotal resection of the stomach; on the other hand are the advocates of medicine who emphasize the hazards and failures of surgery who sing the praises of medical therapy and describe drugs and diets which seem to cure many cases. On last analysis, therefore, any skeptically minded physician seems driven to rely upon his own experiment."

The paper under consideration was the result of a study of thirty-three cases of ulcer, twenty-two male and eleven female. Each of the men and ten of the women had duodenal ulcer and one woman gastric ulcer. The men showed a greater tendency to hemorrhage than the women. The medical treatment was dietary combined with alkalization. The women were found to respond more readily than the men and to become symptom free.

The author places stress upon the psychic factor as an element in the management of ulcer. Incidentally it might be said that Dr. George Draper of the Medical Faculty of Columbia University also emphasizes the psychic factor in the treat-

* What Would You Do if You Had a Peptic Ulcer? by Reginald Fitz, M. D., from the Medical Clinic of the Peter Bent Brigham Hospital, Boston, Mass.

ment of ulcer.* Both writers note the adverse effect of fatigue. In history taking of suspected ulcer cases the fatigue element is a very important item.

Patients with ulcer history are great medical shoppers, that is, they go from doctor to doctor or from gastroenterologist to gastroenterologist—a fact apparent to anyone limiting his practice to X-ray work. Where the X-rays are relied upon as an important diagnostic aid, the radiologist should exercise the utmost care before he declares the condition to be functional, with some such finding as “nervous indigestion.”

In all justice to the writer of the paper, he realizes the utter inadequacy of the number of cases studied to justify any categorical conclusion. His conclusions or impressions to use his own terms are as follows: The mental attitude of ulcer-bearing patients toward their disease and its management plays an important part in their response to any form of treatment. . . . Worry, fear, anxiety, irritation, or undue fatigue all exaggerate ulcer symptoms. . . . A surprising number of ulcer cases get remarkable relief through very simple therapy when the factors of worry and undue fatigue are eliminated, and when the nature of their illness is explained to them. Unsuccessful medical therapy can always be given up for surgical treatment. The surgical treatment of peptic ulcer has an inevitable risk attached to it. A certain number of patients die following even the simplest surgical procedure. The immediate effect of a successful operation for peptic ulcer is remarkably gratifying. Patients gain weight and strength, lose all consciousness of indigestion and ill health, and rapidly reenter the various fields of work in which vitality is of great importance. If such good results were always obtained, were permanent, and if there were no post-operative complications, the surgical methods of treatment would have more adherents. . . . The unsuccessful results of surgery are almost complete failures. The bridges are pretty well burned by an operation; it is a rare patient with a mal-functioning gastroenterostomy or a gastro-jejunal ulcer who can contemplate with equanimity and hope a second operation.

Focal infection in the shape of diseased teeth or tonsils may play some part in the peptic ulcer picture. Possible foci of infection should be systematically cared for.

“Bearing these impressions in mind,” says the writer, “my own conception of the best treatment of peptic ulcer at present available is fairly easy to define. The whole patient, and not only his ulcer, must be treated. He must be given a long period of mental and physical rest, and a simple diet with enough alkali to overcome symptoms. He must plan to lead a well regulated life for months or even years.”

With the last sentiment no one who has had any experience with ulcer will disagree. It is not unduly emphasizing it to say that the ulcer patient must plan to lead a well-regulated life as long as he lives, whether the treatment be medical or surgical. Often both methods fail for the very reason that the patient considers himself cured which he interprets to mean that he can indulge with impunity in any kind of regimen or intemperance.

MEDICAL HOBBIES

“Many of our physicians go abroad for study and recreation. The thought came to mind that such trips could be made more interesting if one had a proper background. This particularly applies to medicine. There is much of interest in Art, Sculpture, and History which if one had some knowledge previous to a foreign trip would make it more valuable. It seems to me if in our Public Library and Art Museum we could get information and have the opportunity of seeing books, paintings, etchings, photographs and other illustrations of famous institutions such as medical schools and their famous teachers it would be a fine thing. If members of the various county societies who go abroad could have some sort of an understanding with the Library and Art Museum boards by which purchase could be made a beginning in this work could be done. As time went on it would greatly increase in value.”

This is an extract from a letter from Dr. W. J. Stapleton, Detroit, Mich. It calls attention to an important matter from the viewpoint of aesthetics or of cultural medicine. Much medical literature is ephemeral in character in as much as it is soon made archaic by subsequent study and research. There are, however, epochal phases of medicine such as Harvey's *De Motu Cordis*, Beaumont's work on digestion and Lister's famous paper on antiseptic surgery which are classics and are therefore not of an age but for all time. Other works of similar or less significance might be mentioned. Members of the medical profession going to Europe might, as Dr. Stapleton intimates, perform a valuable service to their local medical societies by bringing back medical books, particularly old ones of an historical or biographical nature or by procuring medical pictures.

** The Human Constitution by Dr. George Draper being the Beaumont Lectures delivered before the Wayne County Medical Society, 1928.

Of course they should be selected for their intrinsic and permanent value.

Many physicians are beginning to turn their attention to what might be termed the cultural aspects of medicine as distinguished from the scientific and practical features. Only recently the second annual exhibition of works in the plastic and graphic arts by American physicians was held at the Academy of Medicine in New York. More than eighty physicians submitted about three hundred examples of their work which consisted of water colors, photography, pencil drawings and sketches, hand bound books, marquetry, and other examples of handicraft. So much for constructive hobbies.

STANDARDIZATION OF X-RAY APPARATUS

The University of Michigan is offering through the Department of Roentgenology a standardization service to the roentgenologists of the State of Michigan. One of the recent developments in dosimetry is the acceptance of a well defined unit called roentgen unit to be used in the calibration of the output of an X-ray tube. Careful tests have convincingly shown that potential, tube current, treatment distance, filter thickness and time of exposure do not sufficiently define the administered dose. Even if all conditions are alike the emitted X-ray energy differs considerably. The only exact way, therefore, is to measure the actual output of a transformer and tube. While it would be best that an ionization instrument be kept in every laboratory for constant check of the apparatus, it is at least desirable to have such measurements carried out from time to time, particularly if the tube is to be exchanged. The uniform standardization of all machines will facilitate the referring of patients to other laboratories for continuance of the treatment. If all use the same unit to express the administered dose, the majority of the present difficulties can be overcome. Dr. Ernst A. Pohle of the Department of Roentgenology will have charge of the Standardization Laboratory. Upon request the calibration of a machine will be carried out at the earliest possible date. No charges will be made for the service, but it is expected that the actual expenses for the necessary trip will be assured by the requesting roentgenologists. Address all communications regarding this service to the Department of Post-Graduate Medicine, University Hospital, Ann

Arbor, Michigan, envelope marked "Standardization Service."

HALDANE APHORISMS

J. B. S. Haldane is one of the foremost scientists of the Anglo Saxon world. He is professor of Biochemistry in the University of Cambridge, England. Haldane has the peculiar and unique faculty of presenting somewhat abstruse subjects in a forceful and lucid way. In other words he is a popularizer of what may be termed technical science. The following sentence extracts are from his latest book, "Possible Worlds," published by Harper and Brothers:

Modern science began with great acts of doubt.

Scientific men agree to suspend Judgment when they do not know.

It was Sir Christopher Wren who invented not only the intravenous injection of drugs, but the transfusion of blood in the year 1659.

Anti-vivisectionists are responsible for far more deaths in England each year than motor vehicles, smallpox or typhoid fever.

Medical research has been the principal cause which renders the worst slum of today healthier than the palace of a century ago.

The desire for intellectual certitude is laudable in the young, as a stimulus to thought and learning; in the adult it easily becomes a vice.

Man must use his reason to arrive at an appropriate diet.... Humanity is engaged in the awkward passage from an instinctive to a rational choice of food.

Early diagnosis of disease is the business of the general public even more than that of the medical profession. To take an obvious case, venereal diseases in their very early stages are easily and rapidly curable but every day's delay renders the case slower and less certain.

EXTIRPATE THE QUACKS

(The Detroit Free Press)

It seems almost incredible that medical "quackery" can exist except sporadically in this day when there is plenty of opportunity for everybody to learn to distinguish between what is genuine and what is fake in medical practice, and when clear and reliable information regarding the commoner diseases and what ought to be done when they appear, is everywhere available.

Yet there is no reason to suspect any exaggeration in the reports of the discoveries by local and state officials who are making a drive against quack doctors and fake medical offices, and report that they find them by the score in Detroit and Michigan, for the most part operating on the "chain system" and preying heartlessly and extensively on the unsuspecting, the ill, and the gullible.

Such a business is about as low and contemptible as any in which it is possible to engage. It is a traffic in human health and life. Officials are performing a genuine and important public service by carrying on the drive they are making against medical fakers, and they should push their work through to the end and make a complete cleanup.

DONATING MEDICAL SERVICES

When it comes down to donating valuable services, without money and without price, the medical man registers one hundred per cent. Everyone else can charge for his services when it comes to welfare or uplift work, but the physician is expected to give his services, technical and valuable though they be, without hope of remuneration. This is all right if the health clinics and other welfare work requiring the services of a physician are for the indigent, but it is all wrong when the valuable services are rendered to those able to pay. A well-known physician who was contributing a day of his busy life to a baby clinic, and getting nothing for it, was dumfounded when he noted that a half dozen children from well-to-do families that he considered as his patrons were brought to the clinic for free service, and in addition were scheduled for free service at an operative clinic. You hear someone say that health is a community asset that must be conserved, and it is up to the community to aid in the promotion of health. Granted! But clothing and food are necessary for the preservation of health, but do you see any clothing merchants donating clothing to cover naked children, or can you get any photographs of food merchants who are donating food for starving children? No! The benevolent and charitable organizations pay for clothing and food which they donate to the indigent and poor, but they do not expect to pay for any medical service, no matter how valuable such service may be. Probably no reputable physician anywhere in this country refuses to render professional aid to the indigent and poor, but he has a right to complain bitterly when his generosity and charity are imposed upon, and that is exactly what is going on every day in every populous community. There are too many so-called welfare organizations that are asking for gratuitous services from physicians, and it is time for the medical profession to insist that a good deal of this welfare work done by volunteer organizations should be in the hands of organized charity with the medical profession having a voice in the manner in which gratuitous medical services shall be rendered.—From the Journal of the Indiana State Medical Society.

EDITORIAL NOTES

A press item says that the Radio is rapidly winning appeal for itself in the entertainment of patients in New York Hospitals. We can see that there are times when the Radio might encourage convalescence by way of escape particularly when the dinner hour music of some of the hotels was being broadcasted.

Give me a good digestion, Lord, and also something to digest.
 Give me a healthy body, Lord, with sense enough to keep it at its best.
 Give me a healthy mind, good Lord, to keep the good and pure in sight,
 Which, seeing sin, is not appalled but finds a way to set it right.
 Give me a mind that is not bound, that does not whimper, whine or sigh.
 Don't let me worry overmuch about the fussy thing called I.
 Give me a sense of humor, Lord; give me the grace to see a joke,
 To get some happiness out of life and pass it on to other folk.

—The Churchman.

EXCERPTS FROM THE MINUTES OF THE MEETING OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION HELD AT ANN ARBOR, MAY 28, 1928

(Grateful acknowledgements to Dr. W. D. Henderson, Secretary)

Report of the Treasurer of the Joint Committee Publicity Fund of Dr. Warnshuis, Treasurer, showed:

Funds received to date, May 24, 1928:

Michigan State Medical Society.....	\$1,000
University of Michigan.....	500
Michigan State Dental Society.....	500
Michigan Tuberculosis Association...	300
Michigan Hospital Association.....	100
Michigan State Nurses' Association	100

Dr. Warnshuis reported that up to date, May 24, 1928, no vouchers had been drawn against this fund.

A report of the Committee on Publicity. In the absence of Dr. Jackson, Chairman of the Standing Committee on Publicity, Dr. Bruce made a report as to the newspaper publicity program carried on under his direction.

During the past year the Publicity Bureau furnished material for a daily news column in the Detroit News. According to a report of the News officials, this health education service has been entirely satisfactory. Dr. Bruce reported that he had made arrangements with the following newspapers through the Booth Newspaper Syndicate for the publication of daily health articles during the coming year: Ann Arbor News, Bay City Tribune, Flint Journal, Grand Rapids Press, Jackson Patriot, Kalamazoo Gazette, Muskegon Chronicle, and Saginaw News Courier. These papers reach through their various subscription lists a total of over 600,000 persons. It is understood that this service is to begin September 1. The same news item is to be furnished to all papers. Each paper, however, is to have separate and individual answers to inquiries. The various papers mentioned, together with the Detroit News, are to pay a sum equivalent to that which they pay for syndicate articles of a similar nature.

Dr. Bruce called attention to the fact that there are still large areas of the state not reached, as for example, the Upper Peninsula. He outlined briefly a plan for supplying articles to the papers of this region. He also suggested that some plan should be worked out whereby the weekly papers

of the state might have a similar service. Report accepted.

The next business was the discussion of lecture outlines for next year. The following medical health lecture outlines were approved:

The Eye: Conservation of Vision.

The Heart and Its Handicaps.

Mental Hygiene.

Dr. Henderson reported that Dr. Sinai's lecture outline on "The Ear" came to hand too late to be submitted to the Committee. He also reported that the lecture outline on Dental Hygiene which is in preparation by Dr. Seitz of Detroit was not yet finished. It was suggested that this outline when received should be submitted to Dr.

Lyons and Dr. Davis for approval.

Dr. Landers approved the present method of writing the lecture outlines. He suggested the desirability of having groups of doctors who are taking in these high school programs meet occasionally for instruction as to the mechanics of speaking and the psychology of young audiences.

After some discussion of the advisability of making the lecture material more of a skeleton outline and the addition of important facts and bibliographies, it was decided to continue the preparation of the outlines about as submitted, with such additions in the future as might seem wise.

—W. D. Henderson, Secretary.

"MEDICO, SOCIAL AND ECONOMICS"

ORGANIZATION AND OVERLAPPING AUTHORITY

DR. C. B. BURR

FLINT, MICHIGAN

The inhabitants of this once relatively happy land are organized almost to the breaking point with commissions, clubs, associations for the assembling of statistics, "investigating" committees whose output is mostly mischievous and societies for this, that and the other. I know of none looking to the humane treatment of artificial trout flies but this lack may later on be supplied. It is perhaps an extra-hazardous undertaking to turn over in bed without the support of a resolution from some Society for the Disparagement of Insomnia.

In the functioning of a recently formed National organization, the "Federation of Justice," sponsored by Mr. Justice Taft and Vice-President Dawes, there would apparently lie the possibility of distinct public betterment, but the verbosity of its prospectus gives to reel and gasp for breath. Were it to concern itself definitely and wholly with crime-crushing in a crime cursed country, all reputable citizens should hail its appearance with joy approaching the ecstatic, and cooperate to the fullest extent in its purpose. Certainly the wholly admirable Justice Taft has envisioned as few of his fellow citizens the menace of the "Black Army"*—twice the size, according to Judge Kavanagh of the combined Federal and Confederate forces that fought at Gettysburg—as well as the failure of criminal law in meting out justice to the blood-bespattered malefactor.

"SUCCESS" SPEAKS FOR ITSELF

However, the prospectus of the Federation offers no such promise. Its questionnaire is staggering in meticulous attention to the unimportant. Propositions (called "facts") are seven in number, and the first of these the most discouraging of the whole list. It is that "this nation is talking much about the failures of justice but saying little about its successes."

* Vide "The Criminal and His Allies."

Why in the name of all the gods at once should it be concerned with achievement which may be trusted to speak for itself. It would be well to discontinue the popular pastime of patting ourselves on the back and endeavor to look serious. Failures are the only matters over which any enterprise need be worried, and this nation is so crime-ridden that Judge Kavanagh* discussing the protection of life and property makes the appalling prophecy that *the next five years will decide* whether the American people in this regard are capable of self-government.

JUSTICE THWARTED

Venal attorneys in league with gangsters, fly-speck technicalities, unwise reversal of decisions in courts of law, sentimentalism displayed towards the criminal and misconception of the relation of crime and mental disease and defect are among the causes of miscarriage of justice. Judge Kavanagh stresses the lack of swift and sure application of the death penalty in suitable cases. Michigan he cites as in need of this. His position is impregnable. Isn't it time for sensible people to open wide their eyes and unite to rehabilitate good living conditions in this the most crime-steeped among so-called civilized nations? "Go-getting" may well for a time be subordinated to safe-keeping and emotional sobriety be cultivated. A moral sanitarian could hardly escape the conviction from reading Judge Kavanagh's book, that there is dire need of strong soap suds and antiseptics in criminal courts. Little, however, in the opinion of the undersigned, is to be hoped from that intangible something, "pressure of public opinion". Unless it should, regrettably, go over into an organized vigilante movement, it can at best supply but a small thimbleful of elbow-grease to the best element of the legal profession which must manipulate the scrubbing brush. Fatal nation-wide infection threatens.

ECONOMIC LOSS BY MENTAL DISEASE

If, as the New York Times reveals: "Mental disease in the United States causes an economic loss of \$300,000,000 a year," it certainly "pre-

* Op. Cit.

sents a sociological problem of major importance," but that it "should be dealt with by the Federal Government acting in cooperation with the States" is at least open to grave doubt. An example of "cooperation" was given recently in Seneca Falls where Federal agents and local police authorities clashed, the former if my recollection of the newspaper story is correct, being "booed" by the bystanders and escorted out of town. Overlapping authority and jurisdiction are prevalent now all along the border. The theory of States' rights in police matters may be called, for lack of a better name, a "lively corpse".

WHY INVESTIGATE THE OBVIOUS?

And least of all things, this country needs what a proposed enactment provides viz. a board composed of twenty physicians at \$25,000 each per year and an appropriation of \$5,000,000 for investigation of an obvious condition. All statistical information of practical importance is now probably available in Mental Hygiene Associations, or may be obtained from reports of hospitals for the insane and the records of departmental bureaus in Washington. What is needed is the differentiation, in courts, of crime from disease and prescription for the former of the proper penalty—if deliberate murder or robbery armed the electric chair or noose. Bills for enactment into laws are usually drawn by lawyers. Judiciary Committees to pass upon questionable provisions are available. Michigan's last legislature had a painful example of the power of this committee in the Senate. There's small excuse for attorneys' pursuing their favorite indoor sport of scrapping over questions of constitutionality.

LET US LEARN FROM OTHERS

Attention may expediently be turned to England and Canada for enlightenment upon criminal procedure, and to Germany upon the judicial determination of insanity. In Munich an alleged insane criminal is placed under observation as long as is necessary in the Psychopathic Klinik. His case is studied seriously. The eventual findings of the expert staff are final. What this country lacks in administration of criminal laws is finality, and promptness in the application of punishment when necessary; prompt punishment, I repeat, which notwithstanding the wails of the sub-squad is a deterrent influence upon the habitual criminal "always a monster of selfishness." Not the least important among the public services of an excellent President is speaking out plainly on the "exceedingly disturbing" crime conditions (Memorial Day address at Gettysburg). It is highly significant that he should have deemed this necessary.

—C. B. Burr.

MEDICO ECONOMICS

H. B. KNAPP, M. D.

Secretary Calhoun County Medical Society

In the days, when the healing art was largely in the hands of the Priesthood, it is said there was a careless disregard for collections. It seems they depended upon gifts and donations for their income.

The priests have relinquished to the medical

profession the cure of the sick, but the medical man has retained much of the indifference and slipshod methods of accounting and collections formerly a feature of the priesthood craft.

The exacting demands for money by every line of business or profession today makes it quite necessary that the doctor conduct the accounting end of his profession on a business basis somewhat in keeping with other business enterprises. If he fails to do this his income is below what it should be to keep up his post-graduate study, to educate his children and provide for his needs in his old age.

Today every going business concern is connected in some way with a credit rating bureau, and most firms find it necessary and to their material advantage to use these bureaus to encourage the collection of bad accounts. The business man is careful to govern the amount of credit he extends to his trade by the rating of his client.

But the doctor somehow has maintained the attitude that all the world is honest, and that if he is generous enough to give aid to a sufferer, the natural gratitude which results will prompt the patient to pay his bill. But this does not always bring returns. The doctor somehow thinks he is losing business by insisting on prompt payment of bills. So he keeps his patients but loses out on the bills.

Dead beats pay no bills.

If a doctor wishes to be charitable and do free work, that is his privilege. He should tell the patient there will be no charges, and then forget the case so far as money goes. But for the average office call, house call, consultation or operation he should charge a reasonable amount, and let it be known that pay is expected, the same as any other business transaction.

The discovery by the patient that the business relations between he and his doctor are being conducted along lines similar to his business dealings with his lawyer, his grocer, or his garage mechanic, will at least give the doctor an equal chance when the pay check is divided into its proportionate parts.

The organization of a bureau of collections and credit ratings as an official department of organized medical societies will have a salutary effect on those who are inclined to pay the doctor last, if at all. When it becomes known that such an organization exists, the creditor will be careful to keep his name from appearing among those who are delinquent.

By the establishment of a County Medical Society Bureau of Collections and Credits it is proposed that the members turn their bad accounts over to the Society's bonded collector, who will collect these accounts on a percentage basis. As the names of these creditors come to him they will be listed in a confidential credit rating record, and copies of this furnished periodically to each member, with a key number telling exactly who the different doctors are who have bills against the different creditors.

Creditors who never pay, or who owe nearly every doctor in the town, are not entitled to credit, but should be referred to the poor commissioner for his kind consideration, when they need medical attention.

OUR OPEN FORUM

Affording Opportunity for Personal Expression

REGARDING OSTEOPATHS

Summarizing the conclusions reached in our conference yesterday in connection with the case of Harry L. Schaffer, and the limitations on osteopathic physicians generally, I submit the following:

1. The use of the title "M.D." by an osteopath is unlawful.

2. The use of the word "doctor" or "physician" unaccompanied by other designating terms is unlawful. It is not unlawful for an osteopath to use the letters "D.C." provided other terms are used in connection with his name plainly, indicating that he is a doctor of osteopathy, for example; the words "Dr. John Doe, Osteopath" or "Dr. John Doe, Osteopathic Physician and Surgeon" would, I believe, constitute compliance with the law. Such words or titles should be used as would fairly advise the uninformed person without making specific inquiry whether the practitioner with whom he proposes to deal is a licensed physician or an osteopath. If he prefers to be treated by an osteopath he should be given an opportunity to do so knowingly and advisably and not under any possible misapprehension that he is dealing with a licensed physician.

3. The use of the phrase "House Physician" by an osteopath without other qualifying or explanatory words is unlawful.

4. Whether or not serums in certain infectious diseases may be lawfully administered by an osteopath is somewhat of an open question, it being claimed that serums are administered for curative purposes as well as for immunization. In order to avoid the possibility of prosecution being based upon such a claim, I think it would be advisable for osteopaths to voluntarily refrain from administering serums.

—Prosecuting Attorney, Wayne County.

COST OF MEDICAL CARE

Dear Doctor Warnshuis:

I have received the letter bearing Dr. Ray Lyman Wilbur's signature as Chairman of the Committee on the Cost of Medical Care and addressed to Dr. Herbert E. Randall of Flint, Mich.

So far as I know, neither the American Medical Association, the Michigan State Medical Society nor any other society can prevent the organization of any group that wishes to organize. The Committee on the Cost of Medical Care was organized and began the work on the program it had outlined for itself. The original group, so far as I am advised, contained only one practicing physician. Later, one or two other physicians were added to the Committee. I was then asked to become a member and took up the matter with the Board of Trustees of the American Medical Association. The matter was considered for one full day by our Committee on Public Relations. It was the feeling of the Board of Trustees, after a discussion by Dr. Wilbur on what was involved and after consideration by the committee composed of Doctors Pusey, Follansbee, Sleyster and

Fishbein, that it was perfectly apparent that the Committee on the Cost of Medical Care, largely controlled by laymen, was going right ahead with its program and that it might be possible to help guide the movement if more medical representation could be had. I finally agreed to accept membership on the condition that at least five others, practicing physicians, be added.* Having been asked to suggest the names of five men, I submitted the names of Doctors Follansbee, Harris, Morgan, Webb and Steiner, and all were duly elected to membership.

The American Medical Association is undertaking to make certain studies on subjects in which the profession is vitally interested. These studies, however, will be made by the Association for its own purposes, but results will be available for the Committee on the Cost of Medical Care.

You can safely say to your Executive Committee that the American Medical Association is trying to discharge its full duty to the profession and that its efforts are more comprehensive than it is given credit for by some who seem disposed to belittle these efforts.

Very truly yours,
Olin West.

* I am on the committee, with the other gentlemen named, not as a representative of any organization.

LIENS

Dear Doctor Warnshuis:

Physicians, nurses, and hospitals, under the laws of Nebraska, are entitled to liens for their services, on moneys receivable by their patients on account of injuries inflicted by third persons on such patients, when the services were necessarily rendered in the treatment of the injuries so inflicted. Other states may have similar legislation, but in states in which there is no such legislation it may be well to consider the advisability of seeking its enactment. To facilitate such consideration, I submit the accompanying copy of the Nebraska statute.

This statute, enacted in 1927, extends to nurses and hospitals the benefits of a statute enacted in 1915, which established liens for physicians only and makes more specific the manners in which liens are to be enforced.

If this matter is of interest to you and I can be of any help in connection with your consideration of it, I shall be glad to have you write to me.

Yours truly,
Wm. C. Woodward,
Executive Secretary.

Bureau of Legal Medicine and Legislation.

MEDICAL HISTORY

Flint, Mich., May 28, 1927.

To the Officers and Members of
County Medical Societies:

Dear Sirs:

The undersigned, Dr. Winchester, who is undertaking the preparation of a chapter on "Medical Societies of the Lower Peninsula" and Dr. Burr,

Chairman of the Committee of the State Medical Society, earnestly desire comprehensive histories of County Societies (organization, etc.) for publication in the forthcoming Medical History of Michigan.

In connection therewith, and inasmuch as "society" is merely a designation FOR ITS COMPONENT UNITS, it is urgently requested that the names and characteristics of deserving Doctors in the present and past membership of County Societies be given prominence.

Experiences of the old time physician, anecdotes of practice and community relationships, his contributions to medical and other publications, discoveries or inventions, his habits of thinking, acting and emotional response, his successes or unsuccessful strivings, his personality, peculiarities, aptitudes, pastimes, and the impressions derived from contact with him—any or all of these will be deeply appreciated.

The names and activities of useful members of the profession of other days should be preserved in history. This is little enough reward for a life-time of self-denial and self-sacrifice. Anything concerning them cannot fail to be of value and while yet there are still living, patients, neighbors, and confreres who knew of their works and ways, the recollections of these should be faithfully recorded.

No anecdote however trifling should be withheld and piquant out-givings for which the old-timers were noted will lend to any history a "human document" flavor much to be desired. Furthermore, these may bring to light individuals entirely unknown to the Committee concerning whom further inquiry may be profitably made.

For the information of Dr. Biddle, who has charge of the section on "Military Service of Michigan Physicians," there should be especial mention of army service, whether in the ranks before entering upon practice or in the Medical Corps subsequent to graduation.

The Committee urges that help be furnished from every quarter. Will you do them the great favor to make the contents of this communication known to those who may be interested and sympathetic in its purpose? Please talk about it to others and read it at an early meeting of your County Society. Responses from the Upper Peninsula Counties may be made to Dr. T. A. Felch of Ishpeming, or to Dr. W. K. West of Painesdale, those from the Lower Peninsula to Dr. W. H. Winchester, Genesee Bank Bldg., Flint, Mich.

Thanking you in advance, we are,

Faithfully yours,

For the Committee

W. H. WINCHESTER

C. B. BURR, Chairman.

INCOME TAX

Dear Doctor Warnshuis:

As you have already been informed through the pages of The Journal, we lost our fight in Congress for the enactment of legislation that would authorize physicians to deduct in the computation of their federal income taxes expenses incurred in attending meetings of professional organizations. Our fight was lost in the conference committee, and the amendment adopted by the Senate by a large majority in our favor never came before the House of Representatives for a vote.

It may interest you to know that the record of the Senate's vote on the amendment authoriz-

ing physicians to deduct traveling expenses shows that Senator Couzens and Senator Vandenberg both voted in our favor. Possibly a letter of appreciation to let them know that you do appreciate their attitude and that you are in touch with their activities in Congress when they relate to matters of interest to the medical profession, would be wise.

Yours truly,

WM. C. WOODWARD,

Executive Secretary

Bureau of Legal Medicine and Legislation.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

The Radiological Society of North America will hold its 14th Annual Convention in Chicago, December 3rd to 7th inclusive, 1928. The Drake Hotel, Lake Shore drive and North Michigan avenue has been selected as the headquarters. Much attention is being given to arranging for Scientific and Commercial Exhibits. These exhibits will afford a Post Graduate course of instruction in nearly every branch of Medical Science. Clinics covering Radiological problems as well as other branches of medicine will be given every day during the session.

UPPER PENINSULA MEDICAL SOCIETY

The thirty-first annual meeting of the Upper Peninsula Medical Society will be held at Newberry, Michigan, August 1st and 2nd. Registration will begin at one o'clock Wednesday, August 1st. At 1 p. m. the convention will be officially opened by Dr. H. E. Perry, President of the Luce County Medical Society. The President's address will be delivered by Dr. E. H. Campbell, Superintendent Newberry State Hospital. The scientific program will be as follows:

"Industrial Medicine," by Dr. F. J. Maloney, Sault Ste. Marie, Michigan.

"Surgery Involving the Sympathetic Nervous System," by Dr. C. F. McClintock, Professor of Anatomy, Histology and Embryology, Detroit Medical College, Detroit, Michigan.

"Auricular Fibrillation," by Dr. A. J. Carlton, Escanaba, Michigan.

"Kidney Conditions," by Dr. George E. McKean, Professor of Medicine, Detroit College of Medicine, Detroit, Michigan.

"Pernicious Anaemia," by Dr. G. C. Stewart, Hancock, Michigan.

August 2nd—Dr. A. M. Barrett—"Mental Diseases." (Clinic) at "Newberry State Hospital."

"Some Complications of Tuberculosis and Their Treatment," by Dr. S. Lojacano, Superintendent Morgan Heights Sanatorium, Marquette, Michigan.

"Constipation and Diarrhea," by Dr. Clifford G. Grulee, Professor of Pediatrics, Rush Medical College, Chicago, Ill.

"Hypertension," by Dr. John T. Kaye, Menominee, Michigan.

"Prompt Treatment of Compound Fractures," by Dr. Hugh Cabot, Dean and Professor of Sur-

gery, University of Michigan, Ann Arbor, Michigan.

The program will be followed by the business meeting and election of officers.

All meetings will be held at the Community Building except Dr. Barrett's Clinic, which will be held at the Newberry State Hospital. A special program of entertainment is being arranged for the ladies.

A golf tournament will take place at the Newberry Country Club, at 8 P. M. on Thursday.

Banquet at Community Building for members and their ladies will be held 6:30 p. m. Wednesday, followed by a dance in the ballroom of the Community building.

DEATHS

DR. E. C. VANSYCKLE

Dr. E. C. VanSyckle of Detroit died in Providence Hospital on May 12th, of pneumonia. Dr. VanSyckle was born in Ontario 63 years ago. He graduated from the Detroit College of Medicine in 1906 after which he located on the west side of the city, where he was engaged in general practice. He is survived by his wife and one daughter.

DR. GEORGE M. WALDECK

Dr. George M. Waldeck of Detroit died May 30th after an illness extending over several months. Dr. Waldeck was born July 19, 1884, in Milwaukee, where his parents still live. He studied two years at the University of Wisconsin, and later at the University of Michigan, being graduated at Ann Arbor in 1908, after which he spent a year of study in Vienna. Coming to Detroit to practice, he became an associate of Dr. Walter Parker, which association continued for several years before going into practice by himself.

Dr. Waldeck was a member of the American College of Surgeons, the American Medical Association, Michigan State Medical Society, the Wayne County Medical Association, the Ophthalmological Association, the Oto Laryngological Association. He was a member of Corinthian Lodge, of the Detroit Athletic Club, Detroit Country Club, the Indian Village Club and the Phi Beta Pi Fraternity. He is survived by his wife who was Miss Marjorie Paterson.

DR. CHARLES GIRARD

Doctor Charles Girard of Spalding died June 1, 1928. Dr. Girard has been a resident of Spalding for the past seven years. He was 70 years old and death was due to a goiter and complications. Dr. Girard was educated in Victoria College, Montreal and came to Florence, Wis., in 1881 where he began the practice of medicine. Later, he removed to Powers, and from there to Escanaba where he practiced for 29 years, and for the last seven years he has practiced at Spalding. He is survived by his wife and two sons and four daughters.

DR. HARRY E. SHAVER

Dr. Harry E. Shaver of Boyne City died May 15, 1928. Dr. Shaver was stricken while visiting

the Lockwood hospital in Petoskey. The news of his sudden death was a shock to his large number of friends. He was born in Stratford, Ont. in 1878, educated a physician at the Toronto University. Dr. Shaver came to Boyne City in 1900 and was the oldest in point of service of the physicians located there.

DR. RUSSELL J. COLLIER

Dr. Russell J. Collier of Vicksburg died May 28, 1928. Dr. Collier was born December 28, 1896. He graduated from the Vicksburg high school and then attended the University of Michigan, graduating in medicine in 1920. Death followed a week's illness that had its start with influenza and a sinus infection. Dr. Collier is survived by his wife and two children.

DR. CHARLES W. GOFF

Dr. Charles W. Goff, 84 years old, who had practiced medicine in Montrose for the last 60 years, and retired in April, died at his home May 22, 1928. Dr. Goff is survived by three sons.

DR. M. F. DOCKERY

Dr. M. F. Dockery of Iron Mountain, died January 23, 1928.

SURGEON CALLS SPLEEN ELECTRO-MAGNETIC FILTER

Another explanation of the purpose of the spleen, the organ that the ancients removed from their runners to give them, theoretically, better wind, has been advanced by Dr. William L. Robinson of Toronto. The function of this mysterious organ that many people seem to get along very well without, is a sort of electro-magnetic filter, according to Dr. Robinson, that removes from the blood such waste particles as broken-down red blood cells, certain colloidal toxins and negatively charged bacteria. This conclusion is based on experiments in the course of which compounds containing negatively charged silver and platinum and positively charged copper were administered to experimental animals in the laboratory. The first two elements were eliminated through the customary channels, but the copper was retained, Dr. Robinson explained, by the electro-magnetic properties of the spleen acting as a filter.—Science Service.

The relationship between lack of sufficient food and tuberculosis has been definitely proved by Dr. Harry Schutze and Dr. S. S. Zilva of the Lister Institute, London. In their experiments with tuberculosis in guinea pigs during the last six years they have found that diet is a very important factor. They divided their animals into two sets; one set was given a complete normal diet, with abundance of food, and the other set had a similar diet but restricted in amount. The guinea pigs on the restricted diet did not put on weight, whereas the others did. After two and one-half months of dieting, all the animals were inoculated with a living culture of tubercle bacilli, in order to test their resistance. In each case the animals on the abundant diet lived twice as long as those on the restricted diet. In guinea pigs at any rate, plenty of food helps to keep the body free from the ravages of tuberculosis.—Science Service.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EDITOR: Frederick C. Warnshuis, M. D.

Secretary Michigan State Medical Society

MEMBERS REGISTERING AT THE DETROIT POST-GRADUATE CONFERENCE

A list of members, representing 36 counties, who registered at the Post-Graduate Conference held in Detroit in May is herewith recorded:

ROSTER—POST GRADUATE CONFERENCE, DETROIT

BAY COUNTY

Ash, Charles W., Bay City.
Grosjean, Joseph C., Bay City.
Gustin, J. William, Bay City.
Sherman, R. N., Bay City.
Smith, D. P., Omer.
Tupper, V. L., Bay City.
Weston, Daniel, Akron.

BERRIEN COUNTY

Mitchell, Carl A., Benton Harbor.

BRANCH COUNTY

Far, S. E., Quincy.
Schultz, S., Coldwater.
Wade, R. L., Coldwater.
Williams, W. W., Coldwater.

CALHOUN COUNTY

Case, James T., Battle Creek.
Cooper, J. E., Battle Creek.
Fahndrich, C. G., Battle Creek.
Heald, C. W., Battle Creek.
Hoyt, A. A., Battle Creek.
Serio, P. P., Albion.
Sharp, A. D., Albion.
Walters, F. R., Battle Creek.
Welch, R. A., Bellevue.
Zelinsky, Thos., Battle Creek.

CLINTON COUNTY

Scott, W. A., St. Johns.

EATON COUNTY

Burleson, A. H., Olivet.
Dean, Carleton, Eaton Rapids.
Sassaman, F. W., Charlotte.

GENESEE COUNTY

Adams, C. H., Goodrich.
Burnell, B. E., Flint.
Burnell, Max, Flint.
Briggs, Guy D., Flint.
Clark, C. P., Flint.
Curry, George J., Flint.
Edgerton, A. C., Clio.
Evers, J. W., Flint.
Jickling, D. S., Flint.
Malfroid, B. W., Flint.
McArthur, A., Flint.
Orr, J. W., Flint.
Randall, H. E., Flint.
Reid, Wells C., Goodrich.
Rosenthal, Arthur M., Flint.
Wall, W. J., Davison.
Wright, A. G., Fenton.

GOGEBIC COUNTY

Reineking, W. C., Ironwood.

GRATIOT-ISABELLA-CLARE COUNTY

Baskerville, C. M., Mt. Pleasant.
Brondstetter, M. F., Mt. Pleasant.
Budge, M. J., Ithaca.
Burch, L. J., Mt. Pleasant.
Du Bois, Charles F., Alma.
Graham, F. J., Alma.
Highfield, E. M., Alma.
Hobbs, A. D., St. Louis.
Rondot, E. F., Lake.
Smith, R. B., Alma.

HOUGHTON COUNTY

Harkness, Robert B., Houghton.
Wickliffe, T. P., Lake Linden.

HURON COUNTY

Monroe, D. J., Elkton.
Morrison, W. T., Pigeon.

INGHAM COUNTY

Bauer, Theo. I., Lansing.
Bruegel, O. H., East Lansing.
Christian, L. G., Lansing.
McIntyre, J. E., Lansing.
Vanderzalm, T. P., Lansing.

IONIA-MONTCALM

McCann, J. J., Ionia.
Pankhurst, C. T., Ionia.
Swift, E. R., Lakeview.

JACKSON COUNTY

Faust, W. K., Grass Lake.
Hackett, Thomas E., Jackson.
Hungerford, P. R., Concord.
Hurley, H. L., Jackson.
Leahy, E. O., Jackson.
O'Meara, J. J., Jackson.
Munro, C. D., Jackson.
Peterson, E. S., Jackson.
Roberts, A. J., Jackson.
Robinson, D. E., Jackson.
Stewart, M. N., Jackson.
Townsend, J. W.

KALAMAZOO COUNTY

Aach, Hugo, Kalamazoo.
Barrett, F. Elizabeth, Kalamazoo.
Boys, C. E., Kalamazoo.
Crane, A. N., Kalamazoo.
Giffen, J. R., Bangor.
Hubbell, R. J., Kalamazoo.
Jackson, John B., Kalamazoo.
Maxwell, J. E., Decatur.
McNabb, Arthur A., Lawrence.
Rogers, L. V., Galesburg.
Stewart, John D., Hartford.
Stewart, Leonard H., Kalamazoo.
Westcott, Leo E., Kalamazoo.

KENT COUNTY

Boet, F. A., Grand Rapids.
Bolender, J. E., Sparta.
Brook, J. D., Grandville.
Collisi, Harrison S., Grand Rapids.
Corbus, Burton R., Grand Rapids.
De Jong, C., Grand Rapids.
Hebard, Charles G., Grand Rapids.
Helms, Jacob, Grand Rapids.
Menees, Thomas O., Grand Rapids.
Miller, Margaret A., Grand Rapids.
Moore, V. M., Grand Rapids.
Smith, Richard R., Grand Rapids.
Thompson, Athol B., Grand Rapids.
Torgenson, W. R., Grand Rapids.
Votey, F. A., Grand Rapids.
Warnshuis, F. C., Grand Rapids.
Whinery, Joseph B., Grand Rapids.
Williams, Alden, Grand Rapids.

LAPEER COUNTY

Best, H. M., Lapeer.
Gift, W. A., Marlette.
Metz, Henry G., Lapeer.
O'Brien, D. J., Lapeer.
Scott, J. W., Lapeer.
Zemmer, H. B., Lapeer.

LENAWEE COUNTY

Chase, A. W., Adrian.
Marsh, R. G. B., Tecumseh.
Whitney, O., Adrian.

MACOMB COUNTY

Bowen, A. B., Armada.

Curlett, J. E., Roseville.
Norton, W. H., Mt. Clemens.
Sturm, Fred A., St. Claire Shores.
Thompson, A. A., Mt. Clemens.

MANISTEE COUNTY

Oakes, E. A., Manistee.
Robinson, H. D., Manistee.

MECOSTA COUNTY

Franklin, B. L., Remus.

MONROE COUNTY

Acker, Wm. F., Monroe.
McMillan, J. H., Dundee.
Meck, H. L., Dundee.
Newcomb, S. O., Ida.
Smith, William A., Petersburg.

MUSKEGON COUNTY

Bartlett, F. H., Muskegon.
Marshall, F. B., Muskegon.

O. M. C. O. R. O. COUNTY

Abbott, Frank E., Sterling.

NEWAYGO COUNTY

Branch J. C., White Cloud.

OAKLAND COUNTY

Burt, F. J., Holly.
Church, John E., Pontiac.
Corbit, Aileen B., Oxford.
Galbraith, Stuart E., Pontiac.
Grimmett, R. S., Rochester.
Harvey, Campbell, Pontiac.
Hume, T. W. K., Auburn Heights.
Mooney, C. A., Ferndale.
Stimpson, E. K., Pontiac.
Uloth, M. J., Ortonville.
Wilson, S. F., Birmingham.

OTTAWA COUNTY

Stickley, A. E., Coopersville.
Westrate, William, Holland.

SAGINAW COUNTY

Button, Aaron, Saginaw.
Campbell, L. A., Saginaw.
Ernst, A. R., Saginaw.
Grigg, Arthur, Saginaw.
Harvie, L. C., Saginaw.
McLandress, J. A., Saginaw.
McKinney, Alexander R., Saginaw.
Moon, A. Raymond, Saginaw.
Powers, J. H., Saginaw.
Rowe, Bert B., Saginaw.
Stegeman, W., St. Charles.
Stewart, G. W., Saginaw.
Toshach, Clarence E., Saginaw.
Windham, P. S., Saginaw.
Yntema, Stuart, Saginaw.

SANILAC COUNTY

Learmont, H. H., Croswell.

SCHOOLCRAFT COUNTY

Shaw, George A., Manistiquie.

SHIAWASSEE COUNTY

Blue, J. J., Owosso.
Hume, A. M., Owosso.
Wood, W. E., Owosso.

ST. CLAIR COUNTY

Burley, J. H., Port Huron.
Caster, E. W., Yale.
Grice, Lewis W., Armada.
MacPherson, C. A., St. Clair.

TRI COUNTY

Smith, W. Joe, Cadillac.
Moore, S. C., Cadillac.

TUSCOLA COUNTY

Johnson, O. G., Mayville.
Merriman, Henry H., De Ford.
Morris, Frank L., Cass City.
Petrie, William P., Caro.
Spohn, U. G., Fairgrove.
Young, S. B., Cass City.

WASHTENAW COUNTY

Britton, H. B., Ypsilanti.
Canfield, R. Bishop, Ann Arbor.
Donaldson, S. W., Ann Arbor.
Huntington, H. G., Howell.
Newburgh, L. H., Ann Arbor.
Sigler, H. L., Howell.
Soller, M. E., Ypsilanti.
Sundwall, John, Ann Arbor.
Woods, James J., Ypsilanti.

WAYNE COUNTY

Adler, Leopold.
Agins, Jacob.
Allen, Norman M.
Allen, W. O.
Amberg, Emil.
Anderson, Walter T.
Appelbe, Wm.
Axelson, A. U.
Bach, W. F.
Bacon, Vinton A.
Bagley, H. E.
Bailey, Don A.
Baker, Clarence.
Baker, George J.
Ballard, S. W.
Barnett, Louis L.
Baumgarten, E. C.
Bell, John N.
Bell, Wm. M.
Berge, C. A.
Berman, Harry S.
Bernard, W. G.
Bernstein, E. D.
Bicknell, N. J.
Birkelo, C. C.
Bittker, I. Irving.
Blanchard, F. N.
Bleier, Joseph.
Bloom, Arthur R.
Boehm, John D.
Bogan, James H.
Bookmyer, R. H.
Braun, Lionel.
Breitenbach, L. P.
Brines, O. A.
Brooks, Clark D.
Broudo, Philip H.
Brown, G. Van Amber.
Brunk, A. S.
Brunk, C. F.
Buchanan, W. Paul.
Buller, H. L.
Buesser, Frederick G.
Bundy, George.
Burgess, Jay M.
Burnstine, Julius Y.
Burnstine, Perry P.
Butler, Harry J.
Butler, L. H.
Butler, Volney N.
Campbell, Don M.
Campbell, Duncan.
Campbell, Mary B.
Campbell, M. D.
Carlucci, P. F.
Caroll, E. H.
Catherwood, A. E.
Chapman, A. L.
Charters, J. H.
Chester, J. L.
Chrouch, Laurence A.
Clark, Harry L.
Clark, L. E.
Clark, R. L.
Cleland, James.
Clinton, William R.
Cohoe, Don A.
Coleman, Margarete.
Collins, A. N.
Connelly, Basil.
Cook, Henry H.
Coolidge, Maria B.
Cowan, Wilfrid.
Cramson, Max A.
Cree, Walter J.
Crittenden, C. L.
Cunningham, J. W.
Cumming, Robert E.
Curtis, J. D.
Danforth, Mortimer.
Daniels, Lewis E.
Davidson, Edward C.
Davis, James E.
Defnet, W. A.
De Foe, W. A.
De Forest, Alice M.
Delbridge, J. J.
Dempster, J. H.
Dibble, Harry F.
Dibble, John B.
Dillard, M. P.
Dix, Ira J.
Dodds, John C.
Domzalski, C. A.
Doty, A. G.
Doub, Howard P.
Douglas, Bruce H.
Dutton, Charles A.
Eder, L. F.
Elsman, C. H.
Fallis, L. S.
Fay, George E.
Fenech, Harold B.
Finn, Eva M.
Fitzgerald, E. W.
Flora, Wayne W.
Foster, Owen C.
Foster, R. F.
Foster, T. J.
Fowler, Wm.
Freeman, Thelma.
French, Albert L.
Friedlaender, B.
Galdony, L.
Garipey, L. J.
Geib, L. O.
Geib, O. D.
Gellert, I. S.
Gerow, Katherine.
Gitlin, Charles.
Gittins, P. C.
Glenn, Bernard H.
Glowacki, Ben F.
Goldberg, S. E.
Goldstone, R. R.
Gostanian, J.
Green, E. R.
Greenwood, J. H.
Greiner, B. A.
Guimaraes, A. S.
Hackett, Wm. A.
Hagens, Marcus.
Hale, Arthur S.
H'Amada, Norman K.
Hamilton, J. D.
Hammond, H. J.
Hammond, James L.
Hanna, E. Howard.
Hanna, S. C.
Hansen, Frederick E.
Hanser, J.
Harm, W. B.
Harris, Albert E.
Harrison, Henry.
Hawkins, J. W.
Henderson, Harold.
Henderson, Leslie T.
Henry, L. L.
Hildebrandt, H. R.
Hislop, Robert.
Hirschman, Louis J.
Hodge, James B.
Hoff, E. C.
Holaday, C. H.
Hollinger, C. O.
Honhart, F. L.
Hoobler, B. R.
Hromadro, Louis.
Hughes, R. W.
Hull, R. C.
Hulse, W. L.
Inslev, Stanley W.
Israel, J. Hubert.
Jackson, F. D.
Jarre, H. A.
Jentgen, L. G.
Johnson, W. Harold M.
Joinville, Euclid V.
Jones, Morrell.
Kallman, David.
Karr, Herbert S.
Kass, J. B.
Kaye, A. H.
Keane, William.
Keating, Thomas F.
Kedney, H. I.
Kennedy, C. S.
Kenning, J. C.
Kernick, Melvin O.
Kerster, A. G.
Kerzmann, Harry M.
Kirschbaum, Harry.
Knaggs, Charles W.
Knapp, J. G.
Kohn, Martin E.
Kuhn, Charles F.
Lakoff, Charles B.
La Marche, Norman O.
Lamley, G. H.
Larsson, B. H.
Lauppe, E. H.
Lawrence, Wm. C.
Leion, I. H.
Leithouser, D. J.
Lemley, Clark.
L'Esperance, S. P.

Levitt, Edward J.
 Levitt, J.
 Lewis, J. Hugh.
 Lewis, Sol M.
 Liddicoat, A. G.
 Lieberman, B. L.
 Lim, W. K.
 Lipkin, Ezra.
 Lipsky, J. S.
 Livingston, Geo. M.
 Loranger, C. B.
 Loucks, R. E.
 Lutz, Earl F.
 MacArthur, Nelson.
 MacCraken, W. H.
 MacGhee, Charles M.
 MacGregor, Wm. M.
 MacKenzie, Earle D.
 McAfee, Fred W.
 McAlister, G.
 McAlpine, Archibald D.
 McAlpine, Gordon S.
 McClintic, C. F.
 McColl, C. W.
 McCormick, W. H.
 McGarvah, J. A.
 McGraw, Arthur B.
 McKean, George E.
 McKean, Richard M.
 McLean, Angus.
 McPhail, Frank L.
 McPherson, R. J.
 Maloney, John A.
 Mancuso, V. S.
 Marsh, A. R.
 Martin, H. L.
 Matulaitis, Francis.
 Maus, H. J. C.
 Mayer, E. V.
 Mayer, W. D.
 Mayne, C. H.
 Merkel, Charles C.
 Merritt, E. D.
 Mihran, N. K.
 Miller, Hazen L.
 Miller, J. A.
 Miller, M. P.
 Mills, E. P.
 Moehlig, Robert C.
 Moffat, Gordon B.
 Moisides, V. P.
 Mollica, Stephen G.
 Moore, J. A.
 Morris, Keith M.
 Mott, C. P.
 Mudd, Richard D.
 Myers, Geo. P.
 Neary, J. H.
 Neggo, J. A.
 Newcomb, Elizabeth M.
 Newfield, L. L.
 Nittis, S. T.
 O'Brien, E. J.
 Olney, H. E.
 Oman, Cyrus F.
 Ormond, John K.
 Palmer, H. G.
 Palmerlee, Geo. H.
 Pangburn, L. E.
 Panzner, E. J.
 Parmeter, Rolland.
 Pasternacki, B. W.
 Paull, Chester A.
 Peacock, Lee W.
 Penberthy, Grover C.
 Perkin, Frank S.
 Perkins, H. L.
 Peirce, H. W.
 Phillips, F. W.
 Pickard, O. W.
 Pierce, Frank L.
 Pierson, Merle.
 Pinney, Lyman J.
 Piper, C. C.
 Poos, Edgar E.
 Porretta, F. S.
 Potter, Lewis S.
 Potter, Willis A.
 Potts, Enos A.
 Priborsky, Benj. H.
 Price, A. H.
 Raynor, H. F.
 Reed, H. Walter.
 Reinbolt, Charles A.
 Reveno, William S.
 Richey, E. B.
 Robb, E. L.
 Robb, J. Milton.

Robbins, E. R.
 Robinson, Fred L.
 Root, C. T.
 Rosenman, J. D.
 Rosenthal, Jacob.
 Roth, Edward T.
 Runo, Norman H.
 Rupp, J. R.
 Ryan, W. D.
 Sadi, L. M.
 Saltzstein, Harry C.
 Sanders, A. W.
 Sanderson, A. R.
 Sanderson, Herman K.
 Sanderson, S. E.
 Sanderson, Susanne.
 Schinagel, Geza.
 Schultz, R. F.
 Sciarino, Stalney V.
 Seibert, A. H.
 Semmens, A. W.
 Sewell, George.
 Seymour, W. J.
 Sharrer, Charles H.
 Shaw, R. G.
 Shawan, H. K.
 Sherwood, De Witt L.
 Shilkovsky, H.
 Shore, O. J.
 Shute, R. J.
 Silver, M. D.
 Silverman, Israel Z.
 Simpson, C. E.
 Skinner, Charles E.
 Skinner, W. C.
 Slaugenhaupt, J. A.
 Smeek, A. R.
 Smith, Charles E.
 Smith, David C.
 Smith, F. Janney.
 Smith, H. L.
 Smith, James A.
 Spalding, Edward D.
 Spencer, F.
 Stapleton, Wm. J.
 Steinberger, Eugene.
 Stern, L. D.
 Stockwell, G. W.
 Stokfist, T.
 Stone, D. D.
 Stone, Robert S.
 Sugar, David F.
 Sutherland, J. M.
 Texter, Elmer C.
 Thompson, Holland.
 Tibbals, Frank B.
 Townsend, K. E.
 Trask, H. D.
 Truesdell, C. E.
 Turner, Alexander G.
 Tyson, Wm. E. E.
 Ulbrich, Henry L.
 Vander Velpen, Arthur.
 Vardon, C. C.
 Vardon, Edward M.
 Varney, H. R.
 Vernier, Jean A.
 Waddington, J. E. G.
 Wagner, Rudolph.
 Walker, J. Paul.
 Walker, Roger.
 Wallace, W. B.
 Walls, Arch.
 Ward, G. F.
 Warren, Wadsworth.
 Watkins, John Taylor.
 Weller, Charles N.
 Wendel, Jacob S.
 Weyher, R.
 Wershow, Max.
 Wickham, A. B.
 Whittaker, Alfred H.
 Wight, F. B.
 Williams, C. J.
 Williams, Mildred C.
 Wilson, H. M.
 Wilson, Walter T.
 Wisner, Harold E.
 Wittenberg, S. S.
 Wood, G. H.
 Woods, H. B.
 Woods, W. E.
 Woodworth, Wm. P.
 Wright, W. G.
 Yates, H. W.
 Yesavian, H. G.
 Zimmerman, I. J.

COST OF MEDICAL CARE

Dr. F. C. Warnshuis, Secretary,
 Michigan State Medical Society,
 Dear Doctor Warnshuis:

The Committee on the Cost of Medical Care, under the chairmanship of Dr. Ray Lyman Wilbur, and composed of a number of physicians, public health workers, economists and statisticians from various parts of the country, is engaged in making a study of the cost of sickness.

Dr. Sinai of the staff of the committee has already begun upon one of the important studies to be made under its auspices and will soon begin his work in your state. As a member of the Committee on the Cost of Medical Care and at the request of the Committee, I bespeak your kind consideration of Dr. Sinai and your co-operation in the work he is undertaking. It is the plan of the committee to conduct a series of studies extending over a period of five years and to make the most complete examination possible into the costs of medical care. I am assured that the directing officers of the committee have no preconceived ideas, no theories to prove, but that an earnest effort is to be made to get facts and to interpret these facts clearly and in a helpful manner.

In my own opinion the proposed studies that are now being made and that are to be made are important and will be helpful in removing the impression which seems to exist in the popular mind that the biggest part of the cost of medical service is that involved in the physician's fee. I am convinced that that popular impression is wrong and that when all the facts are brought out, it will be shown that the physician's fee is not the major factor in the situation as it seems to exist today.

Dr. Sinai and his associates will undertake to check each case coming under their attention in even minor particulars, and will seek the co-operation of individual physicians in developing the real facts. It will be helpful if you, as Secretary of the Michigan State Medical Society, will do what you can to secure the co-operation of individual physicians and with them give proper guidance to this movement.

This letter is addressed to you by me as a member of the Committee on the Cost of Medical Care and in keeping with my promise to the committee and is not written by me as a member of the official personnel of the American Medical Association.

Very truly yours,

Olin West.

SOCIAL MEDICINE

The appended correspondence is imparted for our members' information and also to commend Dr. Jackson's position. But we wonder how many there are who make these examinations for two dollars? There are doctors who yell and rant about socialized or state medicine, but in their very offices they aid its institution because of compliance with schemes such as this one. Unless you have the stamina to resist these "bids" you 'ere long will be dominated by this and other agencies—now what have you to say about that?

May 28, 1928.

Dr. F. C. Warnshuis,
Grand Rapids, Mich.

Dear Doctor Warnshuis:

I am sending you a copy of some correspondence that I have had with the Equitable Life Assurance Company.

You may make any use of it that you see fit or disregard it entirely.

Yours sincerely,
John B. Jackson.

HEALTH CONSERVATION SERVICE
THE EQUITABLE LIFE ASSURANCE SOCIETY
of the United States, New York City

This service is offered to policyholders of the Equitable, under the conditions mentioned on the reverse side of this memorandum, in the form of a periodical physical examination, the purpose of which is to detect any physical impairment or pathological condition, perhaps unsuspected, to the end that it may be checked in its incipency. The routine of the Service is as follows:

- 1 Policyholders will call on the Doctor at his office during regular office hours, and will present a letter from the Society as authority for the examination. They will also present a short medical form, sample herewith, which contains on the first page a statement of health and clinical history, and on the reverse side provides space for the Doctor's findings. The first page of the blank will be filled out by the policyholder in advance of his call.
- 2 The report, after it has been completed by the Doctor, will be treated as strictly confidential and not disclosed to any person, but will be mailed by the Doctor direct to this office in New York.
- 3 A specimen of urine will be forwarded to this office by the applicant in a container which you will furnish him. A supply of these containers will be forwarded direct to you from this office and will be replenished when necessary upon receipt of advice from you.
- 4 While the examination is short, it is sufficiently thorough to enable an intelligent opinion to be formed of existing physical conditions. The Equitable physician, however, is not expected to offer medical advice, but the report will be reviewed at this office, and wherever need apparently exists, the policy-

holder will be told to seek medical advice.

- 5 The fee for this short form of Health Conservation Service is \$2 per examination, and payment therefor will be made the first of each month direct from this office on examinations received here.

Arthur Geiringer, M. D.
Associate Medical Director

May 18, 1928.

Health Conservation Service,
The Equitable Life Assurance Society of the
U. S. A.,
New York, N. Y.
Gentlemen:

I have your communication of recent date, calling my attention to the Health Conservation Service, offered to policyholders of the Equitable Life Assurance Society. I believe that this effort on your part to conserve the health of your policyholders is a most commendable thing and in line with the many forward movement for the health conservation being carried out at the present time.

Like many other such movements, however, it is to be carried on at the expense of the physician as your local examiner. You have asked me, for two dollars, to make a complete physical examination of the patient and send you a written report on the same. This fee is considerably less than we would charge for private cases and I see no reason why the services should be rendered for an insurance company for this fee. I have for many years been interested in medical organization in this state and last year served the Michigan State Medical Society as its President. In the name of organized medicine, I wish most vigorously to protest against the fee offered by your organization for the service which you request. I shall not be available for such services at this fee.

Yours sincerely,
John B. Jackson.

May 22, 1928.

Dr. John B. Jackson,
Kalamazoo, Michigan.

My dear Doctor Jackson:

We wish to advise you that you need not give service in the capacity of Health Conservation Examiner for the Equitable if you do not wish to do so. If any policyholder should happen to call at your office refer them to this Department for further instructions.

We have thousands of examiners throughout the United States co-operating in this Service to policyholders at the fee mentioned. There have been but very few exceptions where the Doctor has been unwilling to serve. However, your refusal will have no effect upon your standing as an insurance examiner for the Company.

Very truly yours,
A. Geiringer, M. D.
Associate Medical Director.

MICHIGAN HOSPITAL HANDBOOK

The Michigan Hospital Association has just published, with Dorothy Ketcham as author, the Michigan Handbook of Hospital Law. The book itself, although primarily designed for use in Michigan, would be of value to any physician or hospital executive who has the problems of Hos-

pital practice, the soliciting of funds and donations, conditions governing incorporation, inspection, insurance, employment, the status of aliens, workmen's compensation, the removal of dead bodies, autopsies, the consent for operative work, et cetera. The national, state and local agencies used in hospital and allied fields with the service given form one of the appendices. A digest of the laws affecting the registration, licensing and practicing of medicine and nursing in the state as well as the conditions for Hospitals approved for interne training by the American Medical Association and a directory of Hospitals in the States make additional appendices.

The Handbook is clear, concise, up to date and complete at this time. While primarily designed for use in the State, it is the first book of its sort to gather together briefly and topically many of the confused and difficult situations arising in the Hospital practice. In Michigan there are some 286 Hospitals representing institutions for the insane as well as general and special hospitals. There are perhaps 34,773 beds, 12,472 in general hospitals serving 4,012,659 people of the State. The institutions vary widely in size and service rendered, from the one or two-bed adjunct to the physician's practice to the large State institutions, from the institution furnishing barely room and board, to the completed modern hospital with every facility and thought for the patient's care.

A capital investment of millions of dollars is made in these institutions, thousands of people come to them each year for assistance and such an aid to orderly thinking as is found in the Handbook is well worth attention.

FOURTH DISTRICT POST-GRADUATE CONFERENCE

The Post-Graduate Conference for the Fourth District conducted by the State Society was held in St. Joseph at the New Hotel Whitcomb on the 31st of May. The program opened at 10:30 a. m.

The opening statement was by C. F. Boys of Kalamazoo, Councilor for this District.

"Basal Metabolism Study in Goitre," J. B. Jackson, of Kalamazoo.

This was a well prepared talk taken from a large series of cases paying special attention to the relation of pulse pressure to basal metabolism. The study was interesting and the results consistent. Work of this type helps to make more stable the results of basal metabolism tests.

Artificial Feeding of Infants," T. D. Gordon, of Grand Rapids.

Dr. Gordon's talk was one of the most concise and sensible expositions of infant feeding that one could desire. From the standpoint of the general practitioner who must do a certain amount of infant feeding, this talk was very instructive.

"Pelvic Infections," G. Van Amber Brown, of Detroit.

This subject, presented from a surgeon's viewpoint, was a masterful presentation. Dr. Brown's ideas of drainage to some extent are quite revolutionary, and yet are well supported argumentatively. Discussion was cut short on Dr. Brown's paper by the dinner hour.

There were 45 present at the dinner luncheon which was also a social hour. Many of the men attending came from some distance and enjoyed visiting with men from the neighboring counties.

With the coffee Dr. Warnshuis arose to tell the attending physicians what the state and county organizations meant to them. To those who feel that \$10.00 is too much for state dues, a talk of this type from Dr. Warnshuis will surely open your eyes and pocketbooks. There is no question but what we all get more than our money's worth, and that to accomplish what has been, and is being, done for the membership must mean that an efficient, business-like method of administration is being carried on. The protection of organized medicine to the individual may be likened to centralized government. Without it there would be chaos in health administration and discouragement and empty pocketbooks to the practicing physicians. A rising applause was given Dr. Warnshuis and it was the consensus of all those present that the state organization is indeed fortunate to have such a worthy secretary.

After a short intermission the afternoon program was started on schedule. About 20 more men were present for the afternoon meeting.

"X-ray in the Diagnosis of Gall-Bladder" was the topic which Dr. Jackson took for his afternoon talk. This was interesting and practical, covering his method of administration of the dye and interpretation of plates. This method is a valuable adjunct to medical science. Early application to suspected gall bladder disease should bring about much earlier correction of chronic trouble, and avoid the pathology, caused to other organs of digestion, and the resulting failure of corrective methods used too late, should be cut to a minimum.

"Acute Abdominal Conditions," F. C. Warnshuis.

This talk presented from a surgical viewpoint covered the field of acute abdominal surgery in general. No attempt was made because of the wide scope of the subject to deal with particulars, but generalizations of the subject with a plea for early surgical intervention when necessary was made. The careful examination and the necessity for close attention to the patient's history and the order of appearance of symptoms were points especially stressed.

"Uterine Cervix," was Dr. Brown's paper for the afternoon. The shortness of time and the stopping of discussion let Dr. Brown off easy, as several of his assertions were radical and interesting. He also gave a very clear explanation of Sturmdorf's method and technic of trachelorraphy.

"Birth Injuries," by Dr. Gordon, was another concise and interesting paper dealing more particularly with intracranial injuries and their treatment.

"Fractures," by Dr. Warnshuis. This paper, like his previous one, was a general summary of the methods and treatments. The increasing number of automobile injuries makes the methods of dealing with fractures of increasing importance. It was well put and interesting.

This finished the program for the day. It was well attended, very interesting, and of value to all that heard it. It carries out the program as planned by the Berrien County Society. Each month this Society has outside speakers who are specialists, give papers on their specialty. These are then discussed by the local men, interested and practising the same specialty.

The Berrien County Society wishes to publicly thank Dr. Warnshuis and Dr. Boys, councilor for this district, for their efforts in behalf of the district in arranging this program, and also to express our appreciation and thanks to the men who gave the paper, for their interest, clarity and general usefulness, and also the sacrifice of their personal interests in making the trip here.

Every County in the district was represented. A large group from Van Buren, Cass, and Kalamazoo; one from St. Joe County, besides the Berrien County members, were present.

W. C. Ellet.

Sec'y. Berrien County Medical Society.

PHYSICIANS ATTENDING THE FOURTH DISTRICT POST GRADUATE CONFERENCE

Allen, H. C., St. Joe.
Rosenberry, A. A., Benton Harbor.
Becker, L. D., South Haven.
Goodrich, A. L., South Haven.

Hudnutt, O. D., Otsego.
Medill, W. C., Plainwell.
Gordon, T. D., Grand Rapids.
Pepin, Henry A., Pullman.
Merritt, C. W., St. Joe.
McDermott, J. J., St. Joe.
Rinkenberger, A. C., Benton Harbor.
Donna, P. J., Coloma.
Green, Geo. W., Dowagiac.
Herring, N. A., Niles.
Witt, E. J., St. Joe.
Kerry, F. M., Benton Harbor.
Loupee, F. M., Dowagiac.
Bope, W. P., Decatur.
Jackson, J. B., Kalamazoo.
Jenks, I. C., Centerville.
Boys, C. E., Kalamazoo.
Henderson, Abbe, Niles.
Henderson, Robert, Niles.
Jones, J. H., Dowagiac.
Dunnington, R. N., Benton Harbor.
Crowell, F. B., Lawrence.
Herkimer, Dowagiac.
Lyman, W. R., Dowagiac.
Mapoell, J. F., Dowagiac.
Penoyar, F. C., South Haven.
Strayer, J. C., Buchanan.
Snowden, R. H., Buchanan.
Howard, R. B., Benton Harbor.
Helkie, W. L., Three Oaks.
Mitchell, C. A., Benton Harbor.
Stewart, John D., Hartford.
Giffin, J. R., Bangor.
Brown, G. Van Amber, Detroit.
Sowers, C. N., Benton Harbor.
Spawr, C. V., Benton Harbor.
Burrell, H. J., Benton Harbor.
Corey, A. W., New Troy.
Ellet, W. C., Benton Harbor.
Giddings, B. D., Niles.
Schwendener, H. A., St. Joe.
Van Noppen, D—A. Niles.

HOSPITAL STAFF MEETINGS

From time to time over a period of years we commented upon the tendency toward a multiplicity of medical organizations that encroach upon the work of the County Society. Similar comment has been directed toward hospital staff meetings that have within the past few years embraced program features that belong to the County Society. We present our members with the following extract from Secretary West's annual report submitted at the A. M. A. Minneapolis meeting and action taken in reference thereto.

MUNICIPALITY OF MEDICAL ORGANIZATIONS

The fundamental purpose of medical organization in the United States, as defined in the constitutions and by-laws of the American Medical Association and its constituent and component societies, is "to promote the science and art of medicine and the betterment of public health." There was a time when there were few organizations other than this Association, its constituent state associations and their component county societies engaged in those activities contemplated in our scheme of organization and work. For some years, however, there has been a persistent tendency toward the creation and operation of independent scientific societies until now there are

many of them in the field, some highly specialized, some apparently duplicating the work of our own societies or actually attempting to substitute for them. Besides these there are many others not strictly scientific or frankly nonscientific in character whose programs of work and statements of objectives closely parallel those of the various units of our own organization. The members of all these are, for the most part, members of our component county societies. Still other groups have come into being, and their number is not inconsiderable, made up of physicians and laymen and directed, in many instances, by the lay element in their membership. Present-day requirements of various organizations and agencies, established by legislative enactment or voluntarily, having to do with hospitals have resulted in the conversion of the staffs of these institutions into scientific societies. The demands, in time and effort, made on our own members who are affiliated with all of these independent bodies are so great that there is serious question as to whether the medical profession and the public are not actually suffering from the effects of overorganization due to the existence of a veritable multitude of societies, clubs, institutes, colleges, convocations, congresses, conferences, assemblies and associations. Of course, many of these are doing good work, some are helpfully supplemental to regularly organized medical societies, and it is probably true that a few of them are doing what our own societies cannot really do. It is possible, however, if not definitely a proved fact, that some are merely intruding, duplicating and interfering, whether designedly or otherwise.

Overorganization of a profession into official and independent groups will surely lead to division of loyalty, dissipation of effort, wasteful expenditures, inefficiency and obstruction to scientific progress. Overorganization of the medical profession cannot be effected except with the consent and through the participation of the individual physician. He, as a free agent, can and will decide where his loyalty will be given, where his contribution will be made, and how and where his effort and his co-operation will be offered; only he, with his kind, can produce and maintain purposeful and efficient organization through which the work that is given the medical profession to do can be well done.

The American Medical Association is numerically stronger than ever before; we fondly hope and sincerely believe that as a national society it is discharging most of its duties and responsibilities with reasonable efficiency. Our constituent state associations are, beyond any question, stronger and more efficient than they have ever been. There is reason to believe that some component county societies, among them those that formerly were both strong and efficient, have felt the deleterious effects of the existence of too many organized groups, too many meetings, and the division of effort and weakening of allegiance that can hardly fail to develop under such circumstances. These county societies should be given such stimulation and assistance as can be provided, but can best be revived and brought back to efficiency through their own effort and through the undivided support of their own members.

The following was the action taken:

Your reference committee suggests that the staff meetings of hospitals be devoted preferably to executive discussions of problems relating to hospital economics and records, and that members

of the American Medical Association make special efforts to stimulate interest in and the development of scientific medicine in the regularly organized county medical societies.

We urge anew that our members, constituting these hospital staffs, re-affirm their loyalty to the County Society and cause staff meetings to be concerned solely with economic and record problems.

Beg Pardon: This is the caption under which the Illinois State Medical Journal publishes our reply to their editorial in their May issue. It is needless to add that in the spirit of sincere fraternalism Michigan is happy to accede and trusts that Illinois has a clearer concept of organized activity in Michigan.

Upper Peninsula Medical Society holds its annual meeting in Newberry on August 1st and 2nd. A splendid two-day program is being arranged and merits a large attendance. Members of the lower peninsula are cordially invited.

Our Annual Meeting: Our 1928 Annual Meeting will be held in Detroit the week of September 24th. The preliminary program will appear in the August Journal. We urge that you commence planning to attend this annual session.

MONROE COUNTY

Monroe County Society held its April meeting April 19, 1928 at the Park Hotel, Monroe. Dinner was served at 6:30. Dr. C. D. Brooks, of Detroit, gave an interesting illustrated lecture on "The Surgery of Goitre Associated with Hyperthyroidism."

May meeting was held May 25. Dr. Fred Douglas, Toledo, spoke on "Good Results of Gall Bladder Tract Surgery." Dr. L. A. Levinson, Toledo, spoke on "Liver Function Tests and Gall Bladder Disease." Both addresses were excellent.

Florence Ames, M. D., Secretary.

SHIAWASSEE COUNTY

The June meeting of Shiawassee County Medical Society was held at Memorial Hospital, Owosso, on the evening of June 5th with many doctors present.

Dr. James Pierce, Associate Professor of Obstetrics and Gynecology in the University of Michigan, was the speaker of the evening and gave a very instructive practical address on the common problems as met with by the general practitioner. Beginning with vomiting of pregnancy, he indicated the newer conceptions of the various pathological conditions and their treatment. Some interesting case histories were referred to as illustrating certain points made.

The discussion which followed was of interest, and freely participated in.

Recommendation for honorary membership in the State Society for Dr. A. M. Hume of Owosso, a past president of the State Society, was voted by the Society.

Honorary membership in the County Society

was voted to Dr. C. McCormick, also of Owosso. The latter has been in continuous practice since 1872, which was the year of his graduation from the medical department of the University of Michigan.

No more meetings will be held till September.
W. E. Ward, Secretary.

HOUGHTON COUNTY

Regular monthly meeting of Houghton County Medical Society held at Calumet, Tuesday, June 4, at 8:30 p. m. Twenty-two members were present. Meeting called to order by President King. After regular business was disposed of the scientific program was presented. Dr. G. C. Stewart of Hancock read a paper on "Pernicious Anemia," and presented a case of a young boy, 14 years old, whose present R. C. were below a million. Dr. Stewart stated that he contemplated vigorous use of Liver Extracts, and hoped to present a patient much improved at our next meeting.

Paper was interestingly discussed. Society adjourned to lunch.

T. P. Wickliffe, Secretary.

GENESEE COUNTY

Genesee County Medical meeting held at Hotel Dresden, May 2, 1928.

President McKenna in the chair. Minutes of the last meeting read and approved.

Dr. Robert MacArthur gave a very comprehensive talk on "The treatment of Gonorrhea and Its Complications by Diathermy."

Meeting adjourned.

Joint meeting of the Genesee County Medical and Dental Societies was held at Hotel Dresden, May 29, 1928.

President-elect Dr. J. C. Benson presiding. Regular business was dispensed with.

Dr. R. W. Bunting of the University of Michigan Dental School gave a talk on "Dental Caries."

Meeting adjourned.

M. S. Chambers, Secretary.

MACOMB COUNTY

Following is a summary of the program of the Macomb County Medical Society up to and including June of this year, at which time we suspend our meetings until September.

January meeting—Address by Dr. L. Laird: Eye, Ear, Nose and Throat.

February meeting—Address by Dr. D. Siefel: Illustrated Lecture on Orthopedics.

March meeting—Address by Dr. Loren Shaffer: Treatment of Syphilis.

April meeting—Address by Dr. G. C. Burr: Tuberculosis of Kidney, illustrated by motion pictures.

May meeting—Motion picture presentation—How Biological Products are made—by Courtesy, Parke Davis Co.

June meeting—Business Session.

I might also state that at the February meeting the following resolution was adopted.

"Resolved that the Macomb County Medical Society goes on record at this time as being opposed to the establishment of a County Health Unit as outlined in Act 306 of the Public Acts of 1927."

Our next meeting will take place at first Monday in September.

J. N. Schnor, M. D., Secretary.

LENAWEE COUNTY

The regular meeting for the month of May was held in Hudson, Thursday the 24th.

The meeting began in the afternoon with an inspection of the new Thorn Memorial Hospital. The city of Hudson is to be congratulated for having such a fine institution as they have provided for the treatment of its citizens.

The Scientific meeting was held at the Palmer Hotel restaurant beginning with the usual dinner at 7 p. m.

Hillsdale County Medical Society was represented by five members and Fulton County Medical Society of Ohio was represented by their Secretary, Dr. C. E. Patterson, of Fayette.

The speaker of the evening was Dr. E. G. Martin, of Detroit, president of the Wayne County Medical Society. Dr. Martin gave a very interesting talk on pathological conditions found in the anus and rectum and also gave a few minutes to the use of local anaesthesia in surgical procedures of the ano-rectal regions. He divided his talk into three main parts; namely, the methods of examination of the anus and rectum, with a demonstration of a few diagnostic instruments, the diagnosis of a few of the more common diseases, and their treatment.

A report was given of the Secretary's Conference and the application for reinstatement of Dr. B. H. Growt was read and acted upon, favorably.

Announcement was made of the picnic to be held in August jointly with Monroe County Society. There will be an archery contest, golf tournament, baseball game, 22-rifle sharpshooters match, plenty of fun and *no work* for the Ladies Auxiliary of the two counties. The final date and plans will be announced in the August number of the Journal.

R. G. B. Marsh, Secretary.

EATON COUNTY

We were greatly disappointed in the report of Councilor R. C. Stone as regards the Eaton County Medical Society. Instead of being "not active" we had eleven meetings during the year of 1927 (one more than any other County Society in our district).

During the year we were addressed by the following men: Dr. Sleight and Dr. Knapp of Battle Creek, Dr. W. J. Cassidy of Detroit spoke on "The Surgical Abdomen", Dr. Guy L. Kiefer on "Immunation Against Scarlet Fever", Dr. C. C. Young of the State Board of Health on Cutaneous tests for Asthma, the Dick test, and the Schick test. Dr. C. A. Stimson on Rectal Pathology due to Extra-rectal causes, Dr. A. M. Barrett of the State Psychopathic Hospital at Ann Arbor on Present Day Problems in Psychiatry, Dr. Bauch of Lansing gave an interesting talk on his impressions of European Clinics.

At a joint meeting with our wives Dr. Caroline Bartlett Crane gave us a fine talk on the "Doctor's Wife", and Dean King of Olivet College addressed us on the "Tragedy of the Educated Man." Dr. Alter of Jackson addressed us on the "Treatment of Diabetes."

You can see that we had a very active year during 1927.

So far this year we have had very interesting meetings. At our January meeting we were addressed by Dr. John Sanders of Lansing who chose as his topic "Fatigue in Children." Dr. Don Guswold of Deputy State Health Commission also spoke on "Relation of the Physician to Public Health Work," Dr. Alex M. Can spoke of

the State Health Department and also the County Health Unit.

At our February meeting Dr. Poole spoke on the Administration of Toxin Antitoxin to Children in Rural Communities. Dr. Fred P. Currier of Grand Rapids spoke on the subject of "Headaches", and Dr. Merrill Wells of Grand Rapids on "The Duodenum in Upper Abdominal Distress."

Our March meeting was held jointly with the Ingham County Medical Society at which time Dr. Emerson Vreeland addressed us on the "Diagnosis of Cancer in the Gastro Intestinal Tract." Our April meeting was also held jointly with the Ingham County Society.

We are planning on you for our June meeting which will be held at the Charlotte Hotel Thursday, June 28, 1928, at 6:45 p. m. Will try to have a good attendance for you and hope you will speak to us on the subject of "Our State Society."

Carleton Dean, M. D., Secretary.

KENT COUNTY

The activities of the Kent County Medical Society since our last report in April, have been many and varied.

Dr. Clifford C. Gruelee, Eminent Pediatrician of Chicago and head of the Pediatric Department at Rush Medical School, was principal speaker on the Scientific program of April 11, 1928, and gave a very splendid paper on "Intraperitoneal Medication in Infancy."

The evening of April 25, 1928 was devoted to the presentation of a subject always of great scientific interest in this district, namely: "Iodine Hyperthyroidism", which was very ably handled by Dr. Arnold S. Jackson, Chief of the Jackson Clinic at Madison, Wis.

The various committees, standing and special, report considerable progress. Dr. H. S. Collisi, chairman of the committee appointed to co-operate with the City Commission in drafting a New Milk Ordinance, reported his committee had collected data from 25 different cities in the United States and Dominion of Canada, and were in a position to be of real service to the City Commission in assuring the City of Grand Rapids a safe and sanitary milk supply.

Dr. Merrill Wells and his Public Health Education Committee were responsible for the inauguration in this community of Health Examination Week, held May 21 to 26, inclusive. The Committee adopted as their slogan, "A thorough physical examination for every individual once a year." Private patients were urged to present themselves at the office of their individual family physicians, and for those deserving individuals who were unable to pay for private service, the facilities of the Out-Patient Departments of Blodgett Memorial, Butterworth, and St. Mary's Hospitals were generously donated. The individual doctor was urged to make the examination a thorough one, and as an aid, special examination forms were provided by the committee. The week was featured particularly by a general public meeting held in the Press Hall the evening of May 21, at which, in addition to short talks on general health topics by Doctors Gordon, Baker, and Moore, Professor W. D. Henderson of Ann Arbor, Director of the University of Michigan Extension Division, and Secretary of the Joint Committee on Public Health Education, was the principal speaker. Professor Henderson's address titled, "Science and Superstition" was very excellent, and well received.

Dr. Joseph L. Miller of Chicago, Professor of

Clinical Medicine at the University of Chicago, was the principal speaker at the dinner meeting at the Pantlind Hotel, May 23, and took for his subject, "The Diseases of Ancient Man." This meeting, well attended not only by our local members, but also by many doctors from the surrounding County Societies, was a splendid success, the subject of Dr. Miller being novel as well as intensely interesting, and illustrated with lantern slides.

This ambitious program inaugurated this year, will provide for the Public Health Education Committee annually, for years to come, plenty of work to do, for it is the intention of our Society to continue our efforts along this line. The success of the pioneer effort was due in no little measure, not only to the fine co-operation of the hospitals of Grand Rapids, but to the generous publicity given daily by our local newspapers.

J. M. Whalen, M. D., Secretary.

CALHOUN COUNTY

Meeting held May 1, 1928.

Following a complimentary dinner in the dining room of the Kellogg company, the meeting was called to order in the Social Hall.

Dr. R. H. Harris, the president, presided. The secretary's report as printed in the last Bulletin was accepted as printed. The name of Dr. Norman Amos, having been approved by the trustees for membership in the Society, was formally accepted by acclamation.

The following bills were read and ordered paid:

Phoenix Printing Co.....	\$10.25
Vandervoort, Florist.....	7.50
Secretary's Office Expense.....	4.65

The scientific program was the next order of business.

Dr. G. C. Penberthy, of Detroit, discussed the subject of "Rehabilitation in Industrial Surgery." He stated that the treatment of the injured working man begins as soon as the case comes to the hospital, and may continue long after leaving the hospital, or until function is completely restored. In many cases the co-operation of the employer is necessary, in order to place the injured man where he can do light work while developing and training his weakened muscles and joints back into condition. He stresses the value of physical therapy in restoring function to limbs after injury.

Dr. Jno. C. Coulter, of Chicago, was next introduced and spoke on the "Uses and Abuses of Physio-therapy." Physical therapy includes thermal, mechanical and chemical modalities. He was not in favor of the distribution of physical appliances to the public, as the use of physical therapy should only be in the hands of experienced operators.

Dr. Coulter showed two reels of films showing the various methods of administering physical therapy, and showing progress of cases.

He stated that the Carbon Arc Lamp was one of the best methods of administering light, but that the lamps with amperage much below 75 amperes were not much good.

Physio-therapy is the patent medicine of today, and is being exploited by all kinds of quacks and vendors.

The Ultra Violet light has definite but limited uses. It is especially indicated in rickets, tetany spasmophilia and extra-pulmonary tuberculosis as well as leg ulcers, acne, psoriasis, and in some anemias.

Discussion—The papers were discussed by Doc-

tors Roth, Elliott, Brainard, and Gorsline, Giddings, Stone, Haughey and Olsen.

A vote of thanks was given to the Kellogg company for the generous entertainment, and to the two essayists for their papers.

Meeting adjourned.

Members present, 62.

Visitors—Dr. Cornell and Dr. McMannus.

H. P. Knapp, Secretary.

OAKLAND COUNTY

A meeting of the Society was held at 6:30 p. m., Thursday evening, June 21, at the Board of Commerce, Pontiac. Dinner was served.

F. F. Blicke, Ph. D., Assistant Professor of Pharmaceutical Chemistry, University of Michigan, spoke to the Society on "Synthetic Drugs."

The druggists of Oakland County had a cordial invitation to attend this meeting.

At our last meeting, the Society had the pleasure of entertaining Dr. Herbert E. Randall of Flint, president of the Michigan State Medical Society.

Dr. A. W. Newitt, Birmingham, recently completed a course in pediatrics at Washington University, St. Louis, Mo.

Dr. and Mrs. Robert H. Baker left Pontiac on June 12, for Seattle, Washington, where they will attend the Kiwanis International Convention.

Dr. H. S. Chapman has returned to Pontiac after spending the winter in California. He has resumed the practice of golf.

An excerpt from the Principles of Medical Ethics:

Article 3—Duties of Physician in Consultations.

Conxict of Opinion—Section 7. Should the attending physician and the consultant find it impossible to agree in their view of a case another consultant should be called to the conference or the first consultant should withdraw. However, since the consultant was employed by the patient in order that his opinion might be obtained, he should be permitted to state the result of his study of the case to the patient, or his next friend in the presence of the physician in charge.

Consultant and Attendant—Section 8. When a physician has attended a case as a consultant, he should not become the attendant of the patient during that illness except with the consent of the physician who was in charge at the time of the consultation.

Dr. Frank B. Gerls, Pontiac, is taking postgraduate work at the Children's Memorial Hospital, Chicago, Ill.

Dr. I. C. Prevette, Pontiac, has enrolled at Washington University, St. Louis, Mo., where he is taking courses in obstetrics and gynecology.

Dr. Campbell Harvey, Pontiac, is attending the annual meeting of the American Medical Association, at Minneapolis, Minn.

Doctors Howlett and Farnham are occupying new offices in the Huron building, West Huron street, Pontiac.

The next annual session of the Michigan State Medical Society will be held in Detroit in September.

C. A. Neafie, M. D., Secretary.

Dr. Angus McLean of Detroit, who earned exceptional recognition for his services during the World War, addressed the Oakland County Medical Society at its regular meeting in Birmingham. Dr. McLean reviewed the history of war in regard to death and disability.

"There have been 1,300 wars that history and legend have recorded," he said, "and only about a dozen of them have ever settled anything. The wars have left 250,000,000 widows and several billion orphans. There are at present about two billion persons living on this earth, and about seven billion have been killed in wars of the past."

Dr. McLean pointed out that one of the regrettable facts of war was that the nation's finest men, mentally and physically, fought and were killed while those physically deficient remained home and eventually became fathers of much of the next generation.

The cost of the World War to the United States, he claimed, was \$1,000,000 an hour 24 hours a day for 24 months. The cost of the war as distributed among all participating nations was given as \$9,000,000 an hour.

"War," claimed Dr. McLean, "is the world's most expensive luxury. Only a rich and prosperous nation can afford it."

Dr. N. T. Shaw, Birmingham, presided at the meeting and Dr. Herbert E. Randall, of Flint, formerly of Birmingham, and President of the State Medical Society, talked informally. He told of the objects of the State Society and related some of its progress recently. He said that the society is essentially an educational institution, both for its members and the public.

Following the address there was a presentation of educational films by Mrs. Zephia B. Hale, executive secretary of the Oakland County Tuberculosis association. The films were entitled "Let Your Doctor Decide," and "Delay Is Dangerous," and stressed the importance of the early diagnosis of tuberculosis.

KALAMAZOO COUNTY

The regular meeting of the Kalamazoo Academy of Medicine was held May 22, 1928 in the Academy Rooms. The usual dinner was served preceding the evening meeting.

Meeting called to order by the President, Dr. W. E. Shackleton.

The minutes of the previous meeting as printed in the bulletin were approved.

Dr. Andrews of the committee appointed several months ago to investigate the clinics of the city of Kalamazoo read the following report.

"An effort has been made by your committee to suggest some changes in the workings of the cities' clinics and the management of its charity that will be constructive. A study has been made of the present conditions and with the welfare of the worthy poor, the present management of our city charities' organizations, and the physicians, we have endeavored to make some suggestions that will be workable, constructive, and steer us far away from the rock of State Medicine as is possible.

"If the physicians do not take interest enough in the future of the practice of medicine to head off breakers, the public, with little consideration of our profession, will pursue the same course they have been taking until we will be powerless to control our destinies.

The success of any plan to adjust the situation rests entirely on the wholehearted support of all those who practice medicine; but by united effort we can, without disturbing any existing agencies, correct some of our errors and ward off any more serious ones.

"A questionnaire was given to many of our citizens and sent to the Commissioners of Health of many of our cities. The following two questions were asked:

"First. Should the Health Department vaccinate the children of the well-to-do free of charge?

"We received 26 answers to this. Seven were in the affirmative, nineteen negative. Your committee is of the opinion that in the interest of public safety, all individuals should be vaccinated, an effort being made in all cases to have it done by the family physician.

"Second. Should the children of the well-to-do be cared for at the child welfare clinics supported by funds from the civic chest? Twenty-one answers were received. Three were in the affirmative, eighteen were negative.

"It is the opinion of the committee that in no case should the child of any individual able to pay be treated or repeatedly examined at such a clinic.

"It would seem necessary that at the start all individuals applying for free medical aid should be definitely classified. After careful consideration the committee recommends the following classification, which is simple, inclusive, and easy of accomplishment.

"A. Permanently indigent.

"B. Temporarily indigent until given date.

"C. Worthy of care on presentation of security.

"D. All persons unworthy of free care.

"It is recommended that the investigation of all cases be made by an individual, responsible to the city government, and that this investigation be assisted in every way possible by a committee of physicians appointed by the Academy of Medicine, following a plan now in operation in the city of Chicago. This official shall issue a card to each individual applying for charity.

"It is recommended that an Infants Clinic be held at some central station once a week for Classes A and B, and that general education program for mothers and babies be held at intervals of six months, and that all lay organizations be assured that the Academy of Medicine will co-operate to the fullest extent along the lines of the present pre-school clinic.

"In the management of private pay patients in the contagious disease hospital, we feel that the treatment of such patients should remain in the hands of the physician sending in the case, or such patient shall pay the hospital a reasonable fee for medical service.

"It is the feeling that the Public Health nurses should be warned against diagnosing and prescribing. It is recommended that in no case shall quarantine be lifted by a nurse without the sanction of the attending physician.

"It is recommended that the custom henceforth be, that the physician shall render a fee for his services for all cases whether treatment is rendered in free beds or not.

"It is recommended, that persons presenting themselves to the city physician for treatment without registration card shall be charged the usual fee for such services, which charge may be refunded or cancelled upon presentation of card.

"May 22, 1925.

"Signed L. J. Crumb, Chairman

"F. T. Andrews

"R. J. Hubbell

"A. H. Rockwell

"L. E. Westcott."

Dr. Crum read several letters from the Mayors and Health Officers of other cities who were sent questionnaires regarding services rendered in such clinics.

The report was also discussed by Doctors Collins, Westcott and A. H. Rockwell.

Dr. Stewart moved that this report be laid on the table until the next meeting. Seconded; Carried.

There were no other committee reports.

Dr. Goodrich moved, that the business that concerns only those members of the city of Kalamazoo rather than the Academy as a whole should follow the scientific program. Seconded; Carried.

Dr. James G. Carr, Associate Professor of Internal Medicine, Northwestern University gave a very practical talk on the care of patients with cardiac failure. He detailed particularly the care of those with congestive type of failure and discussed his method of giving digitalis.

Discussion on this talk was opened by Doctors Stewart and Westcott. General discussion followed.

A general vote of thanks was given Dr. Carr and he was assured a return trip sometime in the near future.

Meeting adjourned.

BOOK REVIEWS AND MISCELLANY

Offering Suggestions and Recommendations

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1927.—Cloth. Price, postpaid, \$1.00. Pp. 103. Chicago: American Medical Association, 1928.

The Council on Pharmacy and Chemistry of the American Medical Association annually publishes the reports which tell the reasons for non-acceptance of those products which during the year it has found unworthy of recognition. Some of these reports have been published in abstract in *The Journal*; all are contained in full in the volume which is the subject of the present review. The physician who has learned to ask the manufacturer's "detail" man, "If it is not in *New and Nonofficial Remedies*, why is it not?" will find here the answer which that personage will no doubt hesitate to give him. The book shows the

practical working out of the principles which the Council's experience has shown to be essential in its fight for rationality in the field of proprietary medicines.

Among the products reported as unacceptable are: Bismogenol, which is bismuth salicylate under a fancy name; Desitin, a complex mixture from Germany; Hexol, a pine oil preparation for which unwarranted claims are made; Warnink's Advocate, a mixture of potassium arsenite and alcohol in the form of an egg nog marketed without emphasis of the arsenic content in a way likely to lead to harmful and ill advised use by the public; and Solvo Aspirin, another futile attempt to market a solution containing acetylsalicylic acid rendered soluble by addition of sodium bicarbonate.

A glance at the index shows, however, that these reports do not always deal with articles that have been actually rejected by the Council. Preliminary reports are frequently made on new products which appear promising but for which there is not yet sufficient evidence to warrant inclusion in New and Nonofficial Remedies. Included in this group this year are: a report on Blueberry Leaf Extract, which gives promise of being useful in the treatment of diabetes; a report on "Plasmoquin," a substitute for quinine in the treatment of malaria brought out in Germany but thus far withheld from the market by the American agent; a report on "Alpha-Lobeline," which has been the subject of many conflicting estimates but which lacks conclusive evidence demonstrating its usefulness; two reports on Ephedrine, announcing standards, evaluating therapeutic usefulness, and finally announcing the acceptability of the drug and of two of its salts; a report on Bismarsen, a new derivative of arsphenamine containing bismuth and proposed for use in the treatment of syphilis.

Of much current interest is the reprint of the report of Dr. R. A. Hatcher reviewing the literature on the Gwathmey method of colonic anesthesia and evaluating the present standing and usefulness of this method. This report is an outstanding example of the way in which the Council in addition to its other activities aims to contribute to the advance of general medical knowledge.

NEW AND NONOFFICIAL REMEDIES, 1928—Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1928. Cloth. Price, postpaid, \$1.50. Pp. 489 XLIX. Chicago. American Medical Association.

This book is the work of a distinguished organization, the Council on Pharmacy and Chemistry of the American Medical Association, which some twenty years ago was founded to clean out the Augean stables of proprietary medicines. The Council's plan was and has been the publication annually of a book containing descriptions of those unofficial preparations which after careful investigation have been found worthy of recognition and consideration by the medical profession. Such has been the devotion of the Council members, who serve without remuneration, and such the recognition achieved by their work that today the book describes all the new proprietary products which have a scientific base and which give promise of therapeutic usefulness. The physician who best safeguards his own interests as well as those of his patient will give no consideration to any proprietary medicinal agent which is not listed in New and Nonofficial Remedies.

The book is conveniently arranged for reference: each preparation is classified, and each classification is preceded by an authoritative and up to date discussion of the composition, actions, uses, and dosage of the medicament involved. Annually the book is carefully scrutinized and revised to ensure its being in the forefront of medical progress. Products that have been admitted are re-examined at stated intervals to determine if they are keeping their promise of therapeutic usefulness; and new products are admitted as they are found acceptable.

Among the more important revisions this year are: the rewriting or recasting of the chapters on Medicinal Foods, Insulin, Arsenic Compounds, and Iron and Iron Compounds; revision of the chapters on Ovary and Parathyroid to make them conform to the results of recent research; and revision of

the names and standards of the acriflavine dyes. A noteworthy omission is that of all parathyroid gland preparations designed for oral administration, their lack of efficacy by this route having been conclusively demonstrated.

The following are some of the products which have been recognized during the past year and which are now included in the book: Neonol, a new barbitol compound; Mesurol, a bismuth preparation for use in the treatment of syphilis; Bromural, once omitted from the book, but now reinstated as a result of the manufacturer's limitation of therapeutic claims; a number of standardized cod liver oils; Ephedrine, an alkaloid with epinephrine-like properties, and its hydrochloride and sulphate salts; Amiodoxyl benzoate, the ammonium salt of orthoiodoxybenzoic acid, proposed for treatment of arthritis; Crotalus Antitoxin, an antisnakebite serum; several brands of erysipelas streptococcus antitoxin; and Anaerobic Antitoxin, and antitoxic serum for use against gas gangrene.

A REPORT OF THE JOINT COMMITTEE ON HEALTH PROBLEMS IN EDUCATION OF THE NATIONAL EDUCATION ASSOCIATION AND THE AMERICAN MEDICAL ASSOCIATION—Published by the National Society for the Prevention of Blindness; second edition; revised; sixty pages; illustrated. Available at cost, National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C., American Medical Association, 535 North Dearborn Street, Chicago, Ill., or National Society for the Prevention of Blindness, 370 Seventh Avenue, New York, N. Y. Price 35c net.

This report, prepared under the editorship of Dr. Thomas D. Wood, Chairman of the Joint Committee, has the purpose of supplying teachers, school officials, and others concerned with vision problems as related to education, with information, advice and practical directions which will promote the conservation of vision of school children. The present edition includes an illustration of the Symbol E Chart and a Letter Chart, both drawn scientifically to Snellen scale, for use from a twenty-foot distance. All directions for the use of these charts in testing the vision are in line with the most modern approved practice of those now adequately safeguarding the eye health of school children. The new pages and illustrations discussing the technic of using the symbol chart with little children, by adapting it to a game of play, are most convincing evidence of its practical utility for use with young children as well as for older groups. The new chapter on Lighting the Schoolroom is sound in teaching and easily understood by nurses and teachers.

This booklet might well be in the hands of all doctors, nurses and teachers concerned with testing the vision of school children or with promoting eye hygiene.

MEDICAL CLINICS OF NORTH AMERICA—330 Pages, 89 illustrations; published monthly by W. B. Saunders Company, Philadelphia.

This number is entitled "The Mayo Clinic Number" May 1928. This series is well known and this number is up to its high standard. The beauty of this book is the clearness and conciseness with which the subjects are treated. One does not have to wade through a mass of words to get at the gist of what the writer is saying. One cannot in a brief review give any idea of the contents of the book; sufficient to say that it is up to the minute in surgery and medicine.—W. J. S.

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In many cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

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OF THE

Michigan State Medical Society

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ON THE LABORATORY DIAGNOSIS OF TUBERCULOSIS*

MAX PINNER, M. D.

(From the Wm. H. Maybury Sanatorium, Detroit Municipal
Tuberculosis Sanatorium, Northville, Michigan.)

DETROIT, MICHIGAN

The inception of laboratory methods for the diagnosis of tuberculosis is Koch's discovery of the tubercle bacillus. In the period of the first enthusiasm, the clinical diagnosis of pulmonary tuberculosis was deemed established with the demonstration of bacilli in the sputum, and the same diagnosis was discarded when acid fast rods could not be found. When the necessity and the clinical possibility of an early diagnosis became known through the work of Grancher, Turban, and Gerhard, the laboratory responded to the clinical urge by the elaboration of new methods and of innumerable modifications and "improvements". The biologic diagnosis by tuberculin and by uncounted tuberculin-like substances has had its days of unlimited application; they are gone; the limits of tuberculin diagnosis, narrow and definite as they are today, are, or should be, well

known to every medical man. This subject will not be discussed here, because the biologic diagnosis is considered to be a clinical task, since in its performance the stethoscope is as important as is the syringe.

Before discussing somewhat in detail the various laboratory procedures available today, it may not be amiss to mention a few words about the proper approach to, and an intelligent use of laboratory methods. One thing should be clearly understood: the evaluation of a method, the establishment of its percentage error, is a statistical problem. Its application to the diagnosis in the individual patient is a matter of clinical judgment. The appraisal of a method must be done on large series of individuals, healthy, diseased with tuberculosis, and suffering from other diseases. The tuberculous group should include various types, localizations, and stages of the disease. The minimal patient is, for ob-

* Read before the Michigan Trudeau Society, May 18, 1928.

vious reasons, a particularly important group, which is, unfortunately, all too frequently neglected in this type of work. By such carefully controlled work one will be able to determine that a given test is negative in a known percentage of minimal or far advanced cases, that, on the other hand it is positive in a certain percentage of non-tuberculous individuals. This establishes the percentage error of the test.

The clinical application of laboratory results is a problem of an entirely different nature. Let it be said on the outset that no laboratory test exists applicable to the diagnosis and prognosis of tuberculosis, which is 100 per cent correct. Consequently, a diagnostic puzzle cannot be definitely solved by a laboratory test, be its probable error 5 per cent or 50 per cent. It should never be forgotten, and it is forgotten so frequently, that the laboratory can and should only present evidence—and it is circumstantial evidence only, in many cases—and that sentence must be rendered by judge or jury—the clinician. The internist who has his diagnosis made in the laboratory will find much fault with his laboratory man.

It would be an unnecessary reiteration to emphasize the importance of careful co-operation between clinic and laboratory, but I wish to suggest that this be mutual. A laboratory which receives samples of material without careful and explicit clinical data, will be soon reduced to a mere technical workshop unproductive of stimulation and diagnostic suggestion, which the clinician is justified in expecting. In this sense, every clinical department has as good, or as bad a laboratory, as it deserves.

It is necessary to have well understood and definite standards for the evaluation of laboratory tests. They should be chosen with the viewpoint to aid the clinician in his problems of diagnosis and prognosis. It is obviously of little importance to have laboratory tests which are reliable only when applied to far advanced and clinically unproblematical cases. The two chief difficulties which the clinician encounters are: the early and definite diagnosis of minimal and incipient lesions, and correct prognostication at any stage of the disease. If the following discussion may, at times, seem too critical, it should be remembered that the value of tests is here appraised according to the standards mentioned; in other words, a worth while procedure is expected to furnish *more in-*

formation than the clinician can obtain by his own methods.

Specific sérologic reactions may be divided into two large groups: those demonstrating specific antibodies and those demonstrating specific antigens. In the former class all serologic reactions known from other diseases have been employed. Agglutination of tubercle bacilli was advocated by Arloing in France and by his school. Their extensive work showed that serum of tuberculous patients will agglutinate tubercle bacilli in a specific manner; this occurrence was reported in 90 to 100 per cent of patients actively diseased, but non-tuberculous individuals gave the same test in 30 to 70 per cent of cases. This test, then, demonstrates tuberculous *infection* and does not differentiate it from tuberculous *disease*. Numerous modifications of the agglutination test were advocated. Fornet's so-called "defatted bacilli" caused quite recently a revival of this procedure and a volley of publications. But no material progress can be recorded. All the other serologic methods, such as precipitation, opsonin reaction, meiotagmin, and epiphanin reaction, the demonstration of specific defensive ferments—they all have had their advocates, they all have been weighed and were found wanting.

Of all antibody reactions, complement fixation has aroused most interest. The literature on this subject is enormous. Every variable in the rather complex mechanism of this reaction has received special attention and has been subject to innumerable modifications. The appalling number of antigens which have been propounded is ample witness for the lack of satisfaction derived from the results of such tests. Almost every worker in this field has suggested at least one new antigen. Suffice it to mention the names of the better known ones only: Miller, Petroff, Corper, Wilson, Woolley in this country, Calmette and Massol, Besredka, Negre and Boquet in France, Wassermann, Seiffert, Klopstock and Neuberg in Germany, Wang and Crocket, and Dreyer in England, and so on throughout the civilized world. A similar variety of technics is in existence. This work was productive of several very interesting facts in regard to the antigenic structure of the tubercle bacillus and to the biology of tuberculosis. The practical results can be summarized briefly. Tabulating more than 27,000 tests from the literature, the following figures were found (1). The test was positive in

Active Tuberculosis.....	69 per cent
Inactive Tuberculosis	63 per cent
Not Tuberculosis	15 per cent
Wassermann pos. sera.....	29 per cent

My own experience with a variety of antigens in more than 2,000 tests led to the conclusion that active and not active tuberculosis cannot be differentiated by the test. In active tuberculosis we obtained about 75 per cent positive tests, in minimal cases about 40 per cent and in cases without bacilli in the sputum only about 25 per cent. In patients without tuberculous disease, 14 per cent positive tests were obtained. It is evident from these figures that the cases most in need of diagnostic aid cannot derive material benefit from the test. We have discontinued its use. Before leaving the subject of antibody reactions it should be stated that the available evidence would argue for their serologic specificity. Their practical failure is due to the fact that serum antibodies in tuberculosis are inconstant, that they may be lacking in active disease—apparently a prognostically irrelevant occurrence—and that they may be present in latent and healed infections.

Only a few words are necessary about the demonstration of specific antigens. The best known procedure of this type is Wildbolz's auto-urinary test. A limited experience with about 60 patients convinced me that it is highly unreliable. The more recent literature on the subject is unfavorable.

During recent years a considerable amount of literature has accumulated concerning so-called serologic non-specific activity reactions. They are based on the essentially correct observation that infection, tissue destruction, and toxemia lead to a destabilization of the plasma and serum colloids. This physico-chemical change—incompletely understood as yet—is demonstrated either by reagents which precipitate proteins, or by the fact that the red cells settle much faster in such a destabilized plasma than in normal plasma. It is not claimed—or, at least, the claim is not maintained—that any of these tests is specific for tuberculosis. But they are supposed to indicate tissue waste and toxemia, i. e., activity in tuberculosis. The degree of destabilization parallels allegedly the amount of activity. Serial tests would, then, be prognostically most indicative. The red cell sedimentation test has been extensively applied to tuberculosis. The literature is replete with unusual promises as to the value of the test. Cutler (2)

says: "The blood sedimentation test is a more reliable index of the presence or absence of activity than the temperature, pulse rate, gain in weight or physical signs", and from the fact that he found no definite relation between the results of the test and the extent of involvement, curved nails, clubbed fingers, duration of disease, duration of activity, bacillary content of sputum, expectoration and subjective condition, he concludes "that in estimating activity the blood sedimentation test is more trustworthy than any one of the symptoms and signs enumerated." According to printed blanks which he had put on the market the degree of activity can be safely established simply by performing the sedimentation test. We have used this test rather extensively in our laboratory. The details of this study are reported in co-operation with Miss Knowlton and Kelly (3). We used essentially two criteria to evaluate the clinical significance of the test; namely (1), the percentage of patients with definitely active tuberculosis who give a normal rate, and (2), the fluctuations of the test compared with the clinical course of the disease. We obtained normal rates in 14 to 33 per cent of all tests, more than 600 in all. Out of 40 sets of observations, the sedimentation test paralleled the clinical course according to theoretical expectations in 10 cases or 25 per cent, while incorrect results were obtained in 75 per cent of cases. This whole subject cannot be discussed here in detail. Suffice it to say that in our opinion the prognostic significance of the sedimentation test is very small, even if applied serially, that the magnitude of the sedimentation rate, although undoubtedly dependent on tissue destruction, does not parallel the latter. Definitely elevated values are found only in the presence of some pathologic processes, but normal values do not exclude the presence of an active tuberculous lesion. Similar statements would be correct for any and all of the other so-called activity tests which are known under the names of their authors: Matefy, Lange and Heuer, Frisch and Starlinger, Sachs and Klopstock, Vernes, Daranyi. The writer (4) applied the latter test to the serum of more than 500 patients and concluded that this test may have a limited field of application to prognostication, but that a reliable parallelism between test and clinical picture does not exist.

Blood-chemical findings in tuberculosis need but little comment. They should be

considered in the same light as in any other disease. It can be definitely stated that no alterations specific for tuberculosis are known. How much blood-chemical data will help in the intelligent understanding of a given patient does not depend on the laboratory results, but entirely on their clinical interpretation. That they may be significant for the detection of complications and inter-current diseases and important in deciding about surgical interference, is obvious.

Essentially the same is true of morphologic blood studies. Cell counts, and particularly differential counts have their legitimate place. The textbook lymphocytosis in tuberculosis is a myth in the general way in which it is usually stated. Acute exacerbations, miliary spread, rapid caseation—without the interference of mixed infections—may produce leukocytosis. A relative lymphocytosis constitutes then in the hand of the careful interpreter a prognostically valuable sign. Very low figures for lymphocytes indicate invariably a serious prognosis. The relative number of eosinophiles is probably prognostically of interest; but only when at least 500 white cells are counted, can any significance be attached to the findings. Tuberculosis always produces a secondary anemia, usually not very marked. But a pulmonary tuberculosis with 5,000,000 erythrocytes or more will usually be found to be pneumokoniosis.

Very interesting studies have been published quite recently on the ratio lymphocytes to monocytes (5), which may eventually prove to be of real value. The observations on humans are, however, still scarce, so that judgment must be reserved.

Arneth counts, carefully done and interpreted on the basis of a large experience, are of help in determining the resistance and the reactivity of the organism; they are laborious and hardly applicable to routine work.

Sputum examination is still the most important procedure. Here, probably more so than in many other laboratory tests, proper technic and extreme care make for success. Putting a platinum loop or applicator into a narrow-mouthed bottle containing the sputum, leaving it confidently to fate which particle of sputum will adhere to the instrument, opens the road to failure. Such playful practice still goes on under the name of sputum examination. Minute care in selecting the proper particle for examination, the cheesy granule, or the heavy purulent floccule, is para-

mount in importance. There are two more points—often neglected—which insure success: the smear must be made very thin and quite even, and the counterstain should be very light—in fact, much lighter than almost any textbook indicates. No sample of sputum should ever be discarded because it does not look “suspicious”. Perfectly clear, mucoid or watery sputum may contain bacilli, and this type of sputum is more than likely to come from incipient lesions, in which the bacterioscopic diagnosis is of particular importance. Concentration methods—Petroff’s sodium hydrate procedure should be recommended particularly—should be employed for negative samples. A large percentage of positive findings in concentrated specimens as compared to direct smears, indicates oftener carelessness in the preparation of direct smears than the excellence of the concentration method advocated. Cultural methods have proved their usefulness, but space does not permit to discuss them in detail. Animal inoculations are, and should be, the last resort. Anyone who finds many sputum specimens positive only on inoculation, should revise his microscopic examination.

And now to the efficiency of the bacteriologic diagnosis. Dr. Werner and I (6) have just completed a study on this subject. During one year, 115 patients came under our observation in whose sputum tubercle bacilli had not been demonstrated by our repeated routine examinations. Out of these 115 patients, 14 were found to have non-tuberculous pulmonary lesions, such as bronchiectasis, asthma, pneumokoniosis, etc., 33 had no pulmonary lesions whatsoever. This left 68 patients with the clinical diagnosis of pulmonary tuberculosis and with negative sputum. Using a variety of methods, as indicated above, tubercle bacilli were demonstrated in the sputa of 32 patients. To show the relative efficiency of the various procedures, it may be mentioned that the success was due to direct smears in 17 cases, concentrated specimens were positive in 6 additional instances, cultures from otherwise negative material were obtained 4 times, and in only 5 instances was inoculation of guinea pigs more successful than all the preceding methods. This reduced the group of patients with pulmonary tuberculosis and negative sputum to 36. The clinical diagnoses of these patients were as follows:

Apparently cured	3
Apparently arrested	20

Quiescent	8
Frankly active	5

During the period of this work, 507 patients with active pulmonary tuberculosis were under our observation. The outstanding result is, then, that in more than 99 per cent of patients with active tuberculosis, tubercle bacilli were demonstrated in the sputum. The reliability of the bacteriologic diagnosis is accordingly of a very high degree. Sufficiently so, to claim that a consistently negative result, provided the technic is beyond doubt, assumes a definite clinical importance. It may be said, not as a hard and fast rule, but as a working rule which can be successfully applied, that in a patient with a definite parenchymatous lesion, with sputum amounting to about 10 c.c. or more in 24 hours, and with symptoms of activity, a non-tuberculous lesion must be strongly suspected, if persistent and competent search for tubercle bacilli is unsuccessful. With the evidence presented here, the omission of sputum examinations in the presence of a pulmonary lesion must be considered as a grave neglect.

Contrary to the generally accepted belief, negative findings assume a definite clinical significance. They indicate, according to our studies, that the lesion in question is not of tuberculous etiology; or if it is, the absence of tubercle bacilli suggests strongly that the lesion is healed or healing. This explains why, according to numerous statistics, so-called "closed" cases have a much better prognosis than "open" ones. It is evident that these terms—indicating only a surface phenomenon—should be replaced by terms descriptive of the pathologic state of the lesions. Our observations have shown that it is not the extent, but only the pathologic-anatomic character of the foci which decides the presence or absence of bacilli in the sputum.

The example of sputum examinations will well serve to emphasize again the importance of intelligent interpretation of laboratory results, the fallacy of accepting the evidence uncritically. We have seen a case of very far advanced pneumoconiosis, in whom a small fibrotic tuberculous cavity played a clinically unimportant role; but this cavity shed bacilli; uncritical acceptance of this evidence would lead to diagnose erroneously the entire pulmonary pathology as tuberculosis. We have observed a young woman whose sputum contained virulent tubercle bacilli, but she had no pulmonary lesion. Her tonsils, after

removal, were found to contain active tuberculous foci.

Many more or less important laboratory procedures could not be discussed. The examination of gastric contents, feces, urine, exudates, spinal fluid was not mentioned. They all may furnish significant evidence. The same as in the use of clinical data, the all important thing in regard to laboratory data is a proper balance, is the avoidance of undue emphasis on *one* finding alone. As long as one does not lose sight of the fact that the object of diagnosis is not a lesion, or a disease, but the patient, one will not be overwhelmed by *one* sign, *one* symptom, *one* laboratory test.

In modern medicine the tendency is observed to charge the laboratory with too much diagnostic responsibility. This is probably due to the fact that laboratory data as such are unequivocal and but little subject to personal error. What is true of the data, however, is not true of their interpretation. This fact, it seems, is too easily overlooked.

The Alpha and Omega of the laboratory diagnosis is the demonstration of tubercle bacilli, in sputum, in spinal fluid, in gastric content and feces, in exudates, in scrapings and in tissues; but blood-chemical findings, hematologic studies, and certain serologic tests will be helpful; if properly weighed, they will assist in understanding and evaluating the interplay between host and bacilli. If these auxiliary tests are accepted as definite diagnostic and prognostic indexes, they will lead to failure. Their usefulness is in direct proportion with the diagnostic skill of the clinician who uses them.

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THE DUTIES OF THE AURIST AT THE DETROIT DAY SCHOOL FOR THE DEAF*

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The aurist of a school for the deaf finds himself in a comparatively new field. The routine examination of the pupil must take into consideration anything which per-

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tains to the ear and the general physical and mental makeup. A trained psychologist is in attendance at the school. If there is any reason whatsoever to suspect mental deficiency, the pupil is examined from this viewpoint. It would be an injustice to the child, and especially to the other children and the teachers, to harbor a mentally deficient child in the school. Once in awhile a child of low mentality must be referred to institutional care. These cases are referred to the psychological clinic for placement. In case of physical ailments, the child is referred to the family physician, and if, as is so frequently the case, the family is in reduced circumstances, it is sent to a clinic or treated in the school clinic. As an example, it may be cited that a child presented itself which, on the first look, appeared to be pale and sick. Immediate general care was recommended. In three weeks, the child had passed away in consequence of nephritis, as the nurse reported.

NATURE OF EXAMINATIONS

The examination proper, begins, as a routine measure, with examination of the teeth. It is surprising how many children suffer from neglected teeth. If necessary, the school dentist, who also takes care of the children of other schools, is called in consultation. The examination of the teeth has another advantage. A child will not object to examination of the teeth, whereas it would object if it would be told "let me look at your tonsils". When the teeth are examined, it is easy to extend the examination to the tonsils. Examination for adenoid vegetations are not made in the school, for obvious reasons. If the tonsils necessitate removal, and the slightest suspicion exists that adenoids are present, the child is referred to the family physician, who is asked in turn, to recommend a specialist. Numerous instances can be cited in which the ear conditions have been markedly improved after adenectomy and tonsillectomy in pupils who have been sent from other schools. These could remain in their schools instead of being referred to the school for the deaf. Of course, the removal of adenoids is the most important factor in improving the hearing, while the removal of tonsils may improve the general condition in some instances. I examine children frequently whose tonsils and adenoids have been removed, and yet they present a condition which points to the existence of adenoids. It should be remembered that an adenec-

tomy, even if properly performed, may not exclude the reappearance of the disturbing growth. Therefore, a re-examination for adenoids is often recommended. The ears should receive proper attention after adenectomy. Judicious inflation of the ear will do a great deal, but overtreatment must be avoided. Then the ear itself is examined. Malformations, the conditions of the outer ear canals, the presence of cerumen or foreign bodies, the condition of the drum membrane, of the middle ear and the sound perceiving apparatus are noted. Suppurative conditions of the middle ear require special attention. Children with suppurating ears are referred to their family physician, unless they are under the care of a specialist. Operation is recommended if necessary. It must be stated, however, that the advice is heeded only in a few instances, and this only after repeated and urgent requests. It is true that during school life an intracranial complication of ear suppurations rarely develops, but the attention of the parents is frequently and emphatically called to the fact that the child is in a dangerous condition. For some reason or other the advice is not followed, as a rule. Upon inquiry the statement is encountered frequently that a physician has advised to leave the ear alone because the child would outgrow the condition. The hearing tests are made with the audiometer, the human voice, which is the most important examination, and the tuning forks, if necessary. The vestibular tests are made in the turning chair. The tuning forks may reveal tone islands. As Bezold has shown, about 15 per cent of the deaf have some residual hearing. If necessary, a Wassermann test is recommended.

CONSERVATION OF HEARING

The pupils from other schools go through the same routine examination. If we consider that there are at least 10,000 children in Detroit who should be tested thoroughly, one can readily see that our work is in its infancy. An ingenious apparatus facilitates the mass examination of pupils, of 40 at the time. This examination should extend to all school children, about 152,780. This work has now been started in Detroit under the supervision of Miss Gertrude van Adestine, principal of the Detroit Day School for the Deaf. It has been estimated by investigations sponsored by the American Federation of Organizations of the Hard of Hearing that 14.4 per cent of the school children are

hard of hearing (hearing distance less than $\frac{2}{5}$ of the average). It is assumed that 3,000,000 school children in the United States are hard of hearing. There are 17,000 school children in the Schools for the Deaf in the United States. It is absolutely necessary that the 10,000 children in Detroit should not only be examined, but they should remain under constant supervision. This requires a staff of aurists, through whose hands the pupils should be filtered, so to speak. It is next to impossible to examine more than 8 to 10 pupils in an hour. Ten thousand children would take at least 1,000 hours. The aurist of the School for the Deaf has 2 hours a week at his disposal (although he extends the time frequently). Under favorable conditions, it would mean that he can examine, in a school year, about seven to eight hundred pupils. (I think we reached, exceptionally, the number of 1,000 last year). If one aurist can take care of 800 pupils, 10,000 pupils require at least 12 aurists. Here is a wonderful field for volunteers in a work which is of such great importance to the handicapped child and to the community. Let me recommend to the society the earnest consideration of this point.

THE EFFECT OF A HANDICAP

When we consider the mental attitude of a child, we must not forget that a deaf or a hard of hearing child has a psychology influenced by its handicap. It is, so to speak, surrounded by a wall and isolated from the surrounding world. It is the duty of the physician to recognize the defect at an early age, and the task of the teacher to penetrate this wall, to break it down and to establish a contact between the world and the child. How this can be accomplished, can be observed in the kindergarten of the Detroit Day School for the Deaf. Even before the child enters the school, at an age of 3 years, the parents should try to accomplish some of this work. Lip-reading and development of speech are the means to this end in the school. May I call the attention of the members of the society to this field of medical endeavor, in which so much can be done to make people useful members of society? It is possible to make them share the benefits of a full life and to turn depression and misery into joy and happiness.

CONCLUSIONS

1. The ears of all the children in the school must be examined repeatedly. Rec-

ords must be kept concerning the conditions of the ear. Also the mental efficiency of the child must be considered.

2. Pupils from other schools, who are referred to the school for examination must be tested.

3. Medical measures which are likely to improve conditions of the ear must be recommended.

4. The general physical condition of the child must be taken into consideration.

5. The child, suspected to be hard of hearing, must be kept under observation.

HYDRONEPHROSIS

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Hydronephrosis, the term employed to describe a kidney in which the pelvis and calices are dilated and the parenchyma reduced in size, like many words in scientific nomenclature, is a misnomer. The inaccuracy of the word "hydronephrosis" as a descriptive term is evident from its literal translation which implies a watery degeneration of the kidney. A specimen of advanced hydronephrosis reduced to a thin shell of parenchyma and a greatly dilated pelvis may give this impression, when the process of degeneration through which the kidney has passed before this condition is reached, is not recognized.

A study of these stages of degeneration, the results of interference with renal drainage, has made hydronephrosis with its varied etiology, and its pathology based on human specimens and ingenious animal experimentation, a condition amenable in a large degree to modern methods of treatment. Hydronephrosis is of interest not only to the urologist, but to the general practitioner who sees the patient when his symptoms are vague and misleading and who, by careful evaluation of symptoms and early diagnosis of the disease in its early stages, is able to do the patient immeasurable service. It is in the early stages that hydronephrosis may often be cured by removing the cause.

The onset may be insidious with vague somatic and visceral symptoms not referred to the urological tract. Because of superficial examination of the patient and hastily drawn conclusions, frequent mistakes of diagnosis are made. Sterling, Richole, Martin and Chynoweth report that at least 30 per cent of cases of hydronephrosis have had previous abdominal operations with no relief. The symptoms

of hydronephrosis are often confused with those of appendicitis, salpingitis, cholecystitis, uterine malposition, abdominal adhesions and sacro-iliac disease.

PATHOLOGY

No clear conception of the pathology of hydronephrosis is possible without keeping in mind the salient points of renal anatomy with special reference to its vascular supply. Briefly, we must picture the renal cortex and medulla, the pyramids with their apices projecting into the renal sinus, the minor calices enclosing the papillae of the pyramids, the minor calices joining the major calices, which in turn unite to form the renal pelvis. There are three major calices which break up into about eight minor calices. Each minor calyx encloses two to three papillae. The pelvis of the kidney is partly intra-renal and partly extra-renal, an anatomical point of importance, since it is related to a phase of pelvic dilatation.

The renal artery arises directly from the aorta extending to the renal hilus, where it breaks up into four large branches, these passing into the renal sinus anterior to the pelvis and one passing posterior to the pelvis. On entering the kidney substance these arteries divide into two arteries for each side of each pyramid, about thirty arteries for fifteen pyramids. These are the inter-lobar arteries, for each pyramid represents a fetal lobe. The inter-lobar arteries divide at the base of each pyramid into the arcuate arteries from which rise the interlobular arteries. The capillary branches of these, especially the set which supplies the renal pyramids, terminate in veins around the collecting tubules and are the vessels chiefly affected in hydronephrosis. The pressure effects on these capillaries causes the primary atrophy of the kidney.

Hinman and Morrison have shown with celluloid corrosion methods that the arterial changes play a definite part in hydronephrosis. They used rabbit kidneys, dividing the ureter between ligatures. The changes resulting from the complete ureteral obstruction were first: pelvic distention; second, compression of the renal parenchyma; third, progressive displacement outward by distending force within. The recession of the papillae due to compression of the medulla precedes displacement. The arteri-recti of the medulla are foreshortened and later as the pelvic distention increases, the interlobular arteries are similarly changed and the termina-

tions atrophy. The blood flow through the parenchyma is diminished, the tissue tone lowered and complete parenchymal atrophy results due to the ischemia. The main trunks and branches and a few glomeruli near them are the last to survive.

Kairis, working with dogs, showed that with complete obstruction of the ureter, no case of rapid primary atrophy of the kidney was observed. Every case showed a dilatation of the pelvis and hydronephrosis.

In man there is also no primary atrophy of the kidney with complete obstruction of the ureter. Experiment shows that urinary back pressure is the primary factor in hydronephrosis, the blood supply, the second and most important factor in producing dilatation and atrophy.

The size of a hydronephrotic kidney varies according to the duration of the obstruction and the location of the obstruction. The cortex in advanced cases is reduced to a mere shell. The microscopic changes are those of diffuse glomerular-tubular atrophy with replacement of the glomeruli and tubules with connecting tissues.

ETIOLOGY

The etiology of hydronephrosis is always obstruction to the outflow of urine from the renal pelvis. This obstruction may be infravesical, that is, below the bladder, as in prostatic hypertrophy or urethral stricture, or supravescical, above the bladder, as in ureteral calculus.

The kidney is affected by any obstruction, the functional and anatomic changes, depending on the distance of the obstruction from the kidney. In infravesical obstruction, the bladder by hypertrophy of its muscular elements protects the kidney. When the bladder fails to empty and becomes dilated, the outflow of urine from the renal pelvis is slowed by increased back pressure and urinary excretion is impaired. Functional impairment may be present before hydro-ureter or hydronephrosis may be diagnosed in this type of obstruction.

In supra vesical obstruction, the anatomic changes described occur first before functional changes can be recognized. The pressure effects are acute, there being no protection of importance from the bladder, when the removal of a calculus is necessary. Compensatory function of the unobstructed kidney obscures the functional impairment of the obstructed one.

A kidney with a large dilated pelvis may

have a normal function and return to normal when obstruction is relieved.

SIGNS AND SYMPTOMS

Pain is the most constant symptom of hydronephrosis, although it is frequently absent. When due to renal calculus, the pain is colicky and recurrent. When due to stricture of the ureter, it is dull and aching, located in the lumbar region, or referred to the umbilical region or to areas enervated by the lower thoracic and upper lumbar fibers. This type of pain may be mistaken for arthritis of the spine and is often found in cases of kinking of the ureter due to a movable kidney.

Tumor is not a definite sign and may not be felt in fat people. Pain is usually complained of before a mass becomes palpable, but a mass may be present without pain.

DIAGNOSIS

Every patient complaining of chronic lumbar or abdominal pain should have a complete physical examination. With a history of colic, transient polyuria, backache or hematuria, attention should be given to every factor related to this condition. The patient should be carefully examined for evidence of focal infection or diseases of the thoracic and abdominal organs. Careful palpation should be done for tumor or to determine the presence of a movable kidney. Rectal examination to note pathology in the prostate or seminal vesicles must not be omitted. Examination for stricture with a flexible bulbous bougie is necessary. To exclude the possibility of intravesical prostatic median lobe enlargement, a sound must be passed and the prostate examined per rectum with this in situ.

Finally, examination of any patient in whom hydronephrosis is suspected is incomplete without cystoscopy, catheterization of the ureters, renal function determination, and pyelography. On passing the cystoscope, we note any obstruction at the vesical neck. The presence of a calculus, neoplasm, diverticulum, or trebeculations in the bladder is determined. Ureteral orifices are located, carefully examined and catheterized. Obstruction at the ureteral meatus or at any portion of the ureter is noted. After the catheters have been passed to the renal pelvis, specimens of urine are collected and a functional determination with phthalein is done.

Increased intra pelvic pressure denoted by the rapidity and continuity of the excretion of urine immediately after the

catheterization is often diagnostic. Roentgenograms are taken, first in the horizontal position before the injection of sodium iodide, to determine the presence of calculus; the second is taken after sodium bromide has been injected into each kidney pelvis; the third is taken in the vertical position with the ureteral catheters removed, first allowing three minutes to elapse before the film is taken. This last film will give us a ureterogram and any evidence of interference with drainage from the pelvis due to stricture or kinking of the ureter. The normal kidney pelvis has a capacity of three to five ccs. and should empty within three or four minutes.

The preceding measures usually suffice to make a diagnosis not only of hydronephrosis, but also of the causative factor, whatever it may be.

TREATMENT

The treatment of hydronephrosis may be divided into conservative and radical treatment. The conservative treatment, which is applicable in most cases where the functional impairment is slight or moderate and the anatomic changes not so extensive, consists in the removal of the causative obstruction. In infravesical obstruction, this consists in the dilatation of the urethral stricture or the removal of a hypertrophied prostate. In supravescical obstruction, it would consist in the removal of calculi either in the bladder or ureter or dilatation of strictures and kinks. Many ingenious instruments now enable us to remove calculi from the bladder and ureter without operative procedure. Occasional dilatation of the ureter with catheters or bougies may obviate the necessity of a nephrectomy in certain cases of hydronephrosis due to movable kidney, by arresting the progressive degeneration of such a kidney. The application of a well-fitting belt or even the operation of nephropexy which has almost fallen into disuse, may be used to fix a ptosed kidney.

Radical treatment is indicated where the damage to the kidney and its serious systemic effects endanger the life of a patient. In such cases, a very careful study of the patient is necessary before nephrectomy is done. The condition of the companion kidney often determines whether or not such an operation is advisable.

From the foregoing it may be deduced that the subject of hydronephrosis in all its phases is a complex one. Much medical acumen and technical skill must be employed to arrive at a favorable termina-

tion in every case. One point in diagnosis and treatment, however, must be emphasized. Determine first if there is interference with drainage from the renal pelvis, attempt to find the cause for this interference and, keeping in mind that such interference, if maintained even for a short period of time, is dangerous to the function and organic integrity of the kidney, attempt to remove this cause.

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A DIFFERENT ANGLE ON DISPOSING OF TUBERCULOUS PATIENTS

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It has often occurred to me that before my work is finished it might be well to record my contrasting observations of tuberculosis as it is and can be handled in a large city in the east, or, as it may be said, in a so-called unfavorable climatic environment, with my thirty years experience in the west, in a so-called favorable climatic environment. Since I returned to my old home in Detroit, some two years ago, I have been watching alternately, just how tuberculous people are managed and disposed of and with what results. Of course, it would be fine to have thirty years here as well as thirty in the west, but that is obviously impossible at my time of life, so it behooves me to do the best that can be done with what I have before it is too late to record anything. Enough has come under my observation to make what may be said of real value to those who are truly interested in disposing of the tuberculous with their best interests constantly in mind.

About a year ago Dr. James Alexander Miller of New York made the remark before the clinical section of the National Tuberculosis Association that "it was indeed unfortunate that all men interested in tuberculosis could not have Dr. Bullock's experience and practice both east and west." If those in Colorado and New

Mexico, for instance, could exchange places with those on the Atlantic side of the country, and vice-versa, it would, I think, cure them of illusions such as I carried with me for many years. It almost never occurs, however, that one can have the contrasting experiences which have come to me as a result of apparently not being able to live in a high altitude. So, the purpose of this paper is to dispel unscientific ideas about the use and abuse of climatic treatment in tuberculosis.

It may be helpful to go back and recall the professional opinion of climate in the treatment of tuberculosis at the end of the last century. This is at once illuminated by two opposed opinions offered me as a tuberculosis subject in 1898; one from the late Dr. Simon Baruch of New York, and the other from Dr. Edward Janeway of the same city. The former, who was much influenced by the German teaching, then only just being discussed in this country, said, "stay right here in New York and you will get well just the same," and the latter told me, "go as soon as you can to my friend Dr. Edwin S. Solly of Colorado Springs and do just as he says for as long as he wishes you to do it." I took Dr. Janeway's advice and have never regretted it, though now I realize that Dr. Baruch might have been correct in his opinion too. However, having seen very few really recover from tuberculosis while in the service of Dr. E. L. Shurly of Detroit during my student and internship days, it meant a lot to me to go to a place where they actually looked for cure, in early cases, especially, and I have always felt that going to such a place was a big psychologic factor in my own recovery, and being young, my own cure, for such it actually turned out to be, made a tremendous impression upon me, and for years I thought that Dr. Janeway was right and Dr. Baruch wrong. As time went on though, doubts assailed me as more and more the claims of home treatment came to the front until now, after thirty years it almost appears as though the advocates of climatic treatment have been placed permanently upon the defensive.

As the anti-climate school became more and more vociferous and finally claimed the center of the stage my doubts as to the integrity of my position became more and more troublesome, and always I sought a definite answer to the question—just what is there in climate for the tuberculous? It seemed that I must find the reply if I remained happy and contented in my work

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* Read before the Michigan Trudeau Society, May 17, 1928 at the Oakland County Sanatorium for Tuberculosis, Pontiac, Michigan.

of persuading doctors to send me their patients out to New Mexico and of caring for them after they got there. Some people can be seemingly contented in doing something in which their minds and hearts are not engaged, but I never was that way, and as long as I remained out west I sought the solution of my problem. I rather think I have found it, but frankly the answer might have continued to elude me if circumstances beyond my control had not forced me to come east to practice, and thus driven into my head as nothing else could have done, the point-of-view of tuberculosis workers here. Many of us are obtuse when it comes to comprehending things which lie outside our own experience. As "Trader Horn" would say "homo stultus" and I must confess I was no shining exception.

At this point I wish to interject that I do not claim to have discovered all the truth. Only in mathematics can we feel really sure and even then along may come an Einstein who upsets our calculations completely, but I think I have a safe working formula which I should be glad to have any doctor apply to me personally if once more I had to face a period of invalidism from tuberculosis.

Thirty years ago the late Dr. E. L. Shurly of this city started sending me patients with tuberculosis—a practice he continued until his death, to be succeeded in the same way by his nephew, Dr. B. R. Shurly. Back in 1914, or about that time, the last named and myself made an exhaustive study of the first one hundred cases the Shurlys had referred to me at Silver City. This study was reported to the National Association and showed that the results achieved in all classes were superior to those obtained under a like regime in the east, and proved, as well, that it was safe to return home after "cure" in a sheltered climate. It was this study which gave me the first ray of light that my efforts for climatic treatment might be well founded after all.

After my return from France in 1919, I decided to study and classify every case I had ever had in the effort to determine just what had been accomplished in the previous twenty years' work. That study which included all angles I could think of was published in the *American Review of Tuberculosis*, Vol. VI, No. 6, August, 1922, and there is no question of the honesty and good intent which underlaid it. I was much more interested in proving things to myself than to anyone else. But even

after the study was completed, though it helped, I was not wholly satisfied that it meant what it seemed to mean. It was my statistical apotheosis, but nevertheless in any statistical study of tuberculosis there are so many factors and the personal equation may enter so persistently if unintentionally, that one has a right, nay it becomes a duty, to scrutinize most carefully any claims arising as a result of such a study.

In the first place no satisfactory classification of tuberculosis has ever been devised. Turban 1, 2 and 3 means something just a little different to each and everyone, and it takes into account only the size of the lesion. So likewise do different people interpret differently Incipient A, B and C; moderately advanced A, B & C, and far advanced A, B & C. The first is too simple and the second too complicated. My own idea is that positive cases should be considered only as productive or exudative, afebrile or febrile; for as everyone knows, these are the really important factors in the light of end results, and, as they sometimes shade one into the other, they too serve to confuse the issue.

A genuine classification of tuberculosis will be dependent upon an accurate measurement of individual resistance (what determines exudative and what a productive case) plus knowledge of the size of the original lesion, plus possible subsequent infections, if such occur, plus knowledge of the virulence of the parent and later infections, also the size of the dose as well as present factors, such as febrility, constitutional impairment, size of the lesion, etc. Most of the things upon which a real classification must be built are not only now beyond our knowledge but always will be so. With all this in mind one cannot expect to come to absolute and incontrovertible conclusions as a result of studying the statistics of results as reported by any institution.

Nevertheless, I should like to recall just what my study seemed to imply. My own cases were classed according to Turban and the scheme advised by the National Association—I did the same for all cases treated at Ford Bayard and the Trudeau Sanatorium, up to that time in all about thirteen thousand cases. Certainly the number is impressive enough, and if it were not for the uncertain factors referred to in previous paragraphs would be really convincing, and in any event should carry considerable weight. The study showed, *that in the Turban I cases 64 per cent

were arrested at the New Mexico Cottage Sanatorium; at Trudeau 45 per cent; in the Turban II cases 42 per cent were arrested at the New Mexico Cottage Sanatorium and at Trudeau 9.9 per cent; while in Turban III cases at the first named institution 7 per cent were arrested, and at the latter none.

At first glance the result of my study was wonderfully convincing and satisfying to me and seemed to justify my life work and devotion to climate, but the more I thought it over the more doubtful I became for reasons already explained, and it appeared that if not wholly convincing myself, still less could I hope to persuade others. So, the idea was conceived of doing without the classification altogether and to use again the words then employed, "consider only those who are discharged better or worse." "Surely anyone can tell whether a consumptive is better or worse." With this idea of being just as fair and dispassionate as possible I again classified all thirteen thousand cases according to this scheme and here will quote only the results at Fort Bayard and Trudeau, leaving my own cases entirely out. Fort Bayard for the first nineteen years of its existence, beginning in 1899, was conducted by the Medical Department of the U. S. Army. Of course, during those eighteen years when something over five thousand cases were cared for there, many different men worked on the records. At all times it was a public institution, but at no time can it be presumed that anyone had anything to gain by making the results appear better or worse than they really were. As a matter of fact, beginning with the first Com. Officer Major D. M. Appel, to the last, our late regretted Colonel George H. Bushnell, who was certainly not prejudiced one way or the other, no one at Fort Bayard was especially interested in climatic treatment. Everything said of Fort Bayard applies equally to the Trudeau Sanatorium, even the number of cases was about the same. What is the result? First let me say that good results included arrested, quiescent, improved, and bad results unimproved, progressive and dead. In the Turban I class at Fort Bayard the good results were 87.8 per cent; in Turban II, 71.83 per cent; Turban III, 33.45 per cent; at Trudeau, in Turban I cases the good results were 80.7 per cent; Turban II, 63.7 per cent; Turban III, 20.5 per cent. In Turban I cases the difference in favor of Fort Bayard is 7.1 per cent; in Turban II, 8.1 per cent; in Turban III, cases 12.9 per cent. As may be

seen there is a difference, not great, in favor of Fort Bayard in all classes and increasing as the cases get worse. In other words the more extensive the lesion, the more necessary climate becomes, but in any event the final result is a so-called good climate over that in one of less pleasant characteristics is certainly not so superior as ever to be purchased at the expense of the patient's inclination or personal interest outside of the disease.

For one who desires to go west and who can afford to do so the seven to twelve per cent increase in chances is certainly worth consideration. In a disease so serious every favorable influence should surround the patient, and climate takes its place as just one factor among many and can be sacrificed before any of the others, as being less important than proper management, contentment or good food and bodily comfort. I know the climate enthusiasts of which I formerly was honestly one, are going to rise in indignation when they read this, but the truth is the truth and must in the end prevail regardless of vested or personal interests.

In all fairness, however, it must be admitted that it is infinitely more pleasant and easy to take the "cure" in a bright sunny, dry climate than under such dull, skys as Michigan affords for instance, especially during the winter months. The efforts of men here to get fresh air and comfort combined for their patients during the winter are really pathetic and a constant source of annoyance to them and to their patients. We should never forget that under the worst conditions of environment, climatic and otherwise, tuberculosis can and does heal, and as well that often under the very best and most favorable conditions it fails to do so. Using the term environment to comprehend all that enters into an individual case it must be considered decisive in the great majority, but let me accent once more, no one factor can be considered all important or exclusive and least of all climate which we must place at the bottom of the list rather than at the top where it was thirty years ago.

All good things are helpful when obtainable, but one should not be purchased at the expense of another—we must understand, and it can hardly be repeated too often, that it's much better to have good food in Detroit than poor food in Colorado, and better to have wise medical supervision at home than to go away to be mismanaged and exploited, and the Lord

knows I have seen plenty of examples of both in my time.

The study of my cases brought out an interesting fact in this connection and that is that twenty-eight per cent of all the patients I ever had out west for one reason or another, should never have left home. Many of these were too far advanced to expect betterment anywhere. Of this type of case however, the hopeless consumptive, it is most interesting to observe that without them my institution at least could not have remained open; for these cases, requiring more care and a longer time, made a difference between a modicum of success and complete failure—that is financially speaking. I naturally suppose that if such is true of my institution it also holds good as well for the others.

Practically all of my patients were sent to me by physicians, and a small percentage had never been given a chance to try climatic treatment until useless, but, as a rule, the sort of doctor who referred patients to me was only too glad to give a patient a possible enhanced opportunity for recovery. Some of the cases too, composing the twenty-eight per cent, should have remained at home because they were not financially equipped for treatment away from home. As time passed there was a slowly but steadily increasing tendency for the type of case to get worse and more hopeless in prognosis. This, of course, is largely the result of saving climatic change to be tried only after home treatment has failed. Sending people away just to die is both inhuman and unscientific, and not always is the doctor to blame, for at the last moment sometimes they elect to go entirely on their own initiative.

If climate treatment is to be used at all it should be fairly employed, and the indications for its use should be clearly defined, in the minds of medical men particularly, with whom the decision mostly rests, especially those who honestly desire to forward the interest of the patient in all ways. I have no interest in addressing any other class, and probably the others will not read this essay anyway, and it will mean nothing to them if they do.

There is a negative way in which it can be proved without the aid of statistics that climate is of value. Thirty years ago, when as an officer in our Army, I was on duty at Fort Bayard we received most of our cases first from Cuba and later from the Philippines. I never heard a doctor who had served in the tropics maintain other than that tuberculosis was a hopeless

disease under conditions of great heat and moisture, such as is found in the Philippines particularly. It has been the opinion of our Army Medical Department personnel during all the years since the Spanish War that if a tuberculous subject is to be saved he must be gotten out of the tropics. The experience of the British Army in India has been the same. For twenty-five years Dr. W. E. Deeks of the United Fruit Company, sent me patients from Central America and it is the unvarying opinion of the medical men in the employ of that company without any exceptions whatever, that a sure way to kill a person with pulmonary tuberculosis is to try and treat such in the tropics. Thus, if it is known that there are places which are unfavorable there must be places that are favorable in varying degrees depending upon the presence of dryness and coolness, the opposite of the known unfavorable influences, heat and moisture, found in the tropics. One can, on general principles, safely maintain that New Orleans is better than Panama, and New York better than New Orleans, and Saranac Lake better than New York, and Colorado Springs better than Saranac Lake. As one leaves the tropics and comes north it must be deduced that the increment of benefit from change of climate will become less and less—as the natural environment of white races is more nearly approached, until finally only from seven to twelve per cent of enhanced benefit can be expected from going, let me say, from Saranac Lake to Silver City, for instance. It can then be deduced that it is more important for a resident of Florida, or our southern states in general, to make such changes of climate than for the inhabitants of states further north. I believe the above statements to be wholly true and defensible and should receive consideration from thoughtful students of this matter.

At this point it is apropos to point out that the exploitation of such places as Phoenix, Tuscon, El Paso and San Antonio as resorts for the tuberculous is just short of criminal. They have nothing to recommend them but delightful winters—their summers are deadly and no one knows this better than I who for years received patients shot to pieces from a summer in such places after having done well the previous winter in those places. There is hardly a tuberculosis worker who does not appreciate that patients do better in the winter than during the summer, so why, in Heavens name I ask, submit them to

the fearful heat—even though it is dry, characteristic of the summer climate of the places named? The best health resorts in the United States, Europe and Asia are all noted for coolness, which is pre-eminently characteristic of Saranac Lake, Colorado Springs, Prescott, Las Vegas, Santa Fe, Silver City, and to a slightly less extent of Albuquerque. They can talk all they like—these Commercial Clubs and doctors at those hot places about their cool nights—which in my opinion are poor compensation for being roasted all day. I wish all could, for a few hours, have my experience at El Paso during the summer of 1917, when I stood in my O. D. breeches, naked from waist up, examining recruits at El Paso during July and August. In my opinion every time a Commercial Club persuades a “lunger” to go to one of the hot places named it means just one thing, the exploitation of a most unfortunate class.

With no scientific basis whatever large sums of money have been spent in building institutions at these hot places, at El Paso especially, where there are several. Now there is a new and elaborate one at Tuscon, and I was astonished to read the long list of prominent medical men who have loaned their names for its advertisement, and in my humble opinion the exploitation of the tuberculous.

The fact that all consumptives held during the summer in such hot places are not utterly ruined speaks for two things, the tremendous resistance of the white race to unfavorable environment and the fact that the heat is not combined with moisture and is thus less injurious and also at night they get a certain amount of relief. I wonder if it were commonly understood that the residents of Tuscon and Phoenix particularly, go away during the heated season whenever they can afford to get away, and live in their cellars when they cannot, if so many distinguished men would have loaned their names for propaganda in their favor.

Altitude, about which we have heard so much, is only important as a modifier of temperature, and to a less extent the increasing thinness of the atmosphere as one ascends permits more actinic light to get through; but its influences upon temperature, the higher the cooler, is really the important one. For instance, the City of Mexico, a thousand miles farther south, has a wonderful summer climate, but the altitude is over seven thousand feet. Altitude, that is, up to seven or eight thousand feet, has no effect upon pulse, respira-

tion, or blood pressure in resting acclimated persons. As the general condition improves the blood pressure does increase but this is not an effect of altitude. The tendency toward pulmonary hemorrhage is not increased by altitude. The number of red cells is increased directly in proportion to the altitude. This is a compensatory phenomenon to make up for the lessened amount of oxygen in the atmosphere.

Of course during exercise quite a different picture is presented, for with increased altitude under exercise the lungs and heart must work more as the altitude increases. Therefore the use of exercise is a matter requiring more good judgment and caution than at sea level.

It is much more pleasant to take the “cure” in a place that is bright and sunny all the time—not too cold in winter nor too warm in summer—than in less favorably situated spots. If I had my own experience to repeat I would do as I did thirty years ago, and go to the right place and the right doctor out west. Getting well in Sanranac Lake with the temperature below zero in the winter months may be efficient, but for me at least it would be a real labor and most unpleasant, when one might as well go where day after day and all winter long one can watch the sun rise in a blaze of glory and feel its genial rays all day until it sinks in gold and purple splendor in the western mountains.

Now let us consider the new point of view gained since I have had the opportunity to study the problem of disposing of tuberculous people in an unfavorable climate, as it effects the average doctor as well as the man more especially devoting himself to the practice of so-called phthisiotherapy. I cannot do better, I think, than to give the principles as they have been applied in this office, for the past fifty years—first under Dr. E. L. Shurly and later under Dr. B. R. Shurly.

In fact, in one particular, the practice has not varied during all those years. It has always been recognized that there are better places than Michigan for the tuberculous, and no impediment has ever been placed in the way of a patient who desires to go away. The passing of the years, however, has witnessed a change in one respect; namely, formerly they were urged to go, and latterly no pressure is brought to bear to make them go. It is interesting to know how this has come about. First, it has been recognized that going away is not as essential as formerly it was thought to be, and second a queer psychologic

change has come over the people, the result of many factors the influence of which, though potent, is not always clear and differentiated.

There was a time when people would go to any reasonable length to send a stricken relative west, even mortgaging their homes to do it. That time is history. The poor of former years have moved to the place once occupied by the middle class—the thrifty ones who saved for a rainy day. Now, the family income is often almost wholly employed in paying for a house purchased on contract and as well an automobile, a radio, insurance, furniture, an electric washing machine, etc., bought on the installment buying plan, which system, though it has made the producer of manufactured goods exceedingly prosperous, has, in large cities at least, nearly driven the general practitioner to desperation and produced in the people a frame of mind opposed to saving for the exigencies of life. So, when the emergency arises, the trouble is promptly thrown upon the State. Whether some of our sociologic practices will establish a vicious circle, tending more and more to impair the initiative and independence of our people is a problem that I for one do not feel able to solve, but I am fearful of the ultimate result to say the least. Anyway, it's perfectly clear that when tuberculosis occurs in a family the first thought is often the State Sanatorium or some other charitable agency—with mothers' pension, and all the things which appear so lovely on the surface but are in fact eating the very heart out of independence and character. Also the continuous extension of police power as exercised by Boards of Health, the first thought being "get the patient into our sanatorium" still further impairs the physician's ability to dispose of a case in a manner which appeals to him as in the patient's best interest, and what has been said of Boards of Health applies equally to the University Hospitals, which in their desire for clinical teaching material quite lose sight of the fact that there are still a goodly number of physicians throughout the state trying to make a living by the practice of medicine.

Even when people should be able to afford to go the labor of persuasion is often too great and unprofitable, for in the end they will do as they please anyway, or take some friend's advice and go somewhere where they should not go. Our profession has indeed lost some of its authority with the people. Once a doctor could talk as Dr.

Janeway talked to me and would be obeyed, but that time is also history. Now they will shop around and among the varying opinions received take a friend's advice or as a rule permit the tax-payer to foot the bill in the end.

During thirty years the Shurlys sent me hundreds of cases for which they received nothing but my gratitude and that of an occasional patient who recovered, but mostly they received grief, in that their patient or some "kind" medical friend would state or imply that the reason for sending the patient to me at Silver City laid in the supposed financial relation between us, when as a matter of fact in thirty years I never had any financial dealings with either of the Shurlys until I left the west and went to work for one of them. So that doing ardent missionary work on behalf of the consumptive only to have one's motives misinterpreted is a thing of the past where our office is concerned. Naturally, if the patient exhibits a receptive frame of mind such will get the benefit of fifty years' experience in sending patients about the world for their health's sake.

How many people under modern conditions can be sent west anyway? That question is easily answered, for me at least, for I have kept careful records since coming here, and just five per cent will admit that it is financially possible for them to go away for twelve months which we consider the minimum time they should at least be prepared for. So, if only five out of a hundred can be sent away the question of sending them is mostly academic; for out of every five financially able to go there will be one or two who cannot go on account of family or some other reason.

It is calculated that there are about one million active consumptives in the United States and five per cent of the number would be fifty thousand, which would much more than fill all the western sanatoria and health resorts that truly deserve to have such invalids sent to them. I judge that number is really many more tuberculous people than there are in the west at any one time—that is active cases—so it is probably safe to say that only two out of each hundred can or will go. So there is little or no use trying to sell climate, to use a modern term, for the benefit of such a small proportion. We will take any amount of pains if the patient appears at all receptive, and will send them away according to our long experience and the following principles.

In general it should be said that every

detail affecting the case should be taken into consideration, and about the last thing is the question of family economics. One hundred and fifty dollars a month for twelve months is the minimum sum necessary. During the first twelve months, a time, as a rule, long enough to either bring about arrest or establish the status, the patient must be absolutely free from financial worry—any conflicting state of mind will endanger the result and is not to be tolerated. It is also essential that the ones left behind should be at least relatively free from financial anxiety; for if not, the patient, such being human nature, will get the repercussion to his or her disadvantage. I rather think that we are almost alone in carrying protection of the taxpayer and the maintenance of family independence into our practice. It, however, seems to us important that the family as an independent economic unit be preserved as far as possible, and the most helpful thing along this line is the immediate induction of pulmonary collapse. When artificial pneumothorax can be efficiently applied it so far transcends all other therapeutic agencies as to make the others insignificant. This is not the same as saying that the old and tried should be discarded, but their relative inefficiency is fully demonstrated by a successful collapse case with no special attention to any other therapeutic measure. In order to have a family maintain their independence we often take but a week or two to get artificial pneumothorax well started and then let the father or mother, as the case may be, go right on with the work they have been doing. Of course, we take into consideration the kind of work, but most factory jobs are pretty easy these days. In this manner many cases are carried from start to finish—a year or two—without hardly knowing that they ever had tuberculosis. From this it follows that we believe in the use of artificial pneumothorax at the earliest possible moment—as soon as a positive sputum is demonstrated and the case is entirely or relatively unilateral. It not only saves the people from being sent away for climate treatment but as well saves sanatorium facilities for those who really require such treatment.

If there are very small children in the family it is theoretically desirable to separate them from a tuberculous parent, and this influences us in sending the patient—either west or to an institution to a certain extent depending on how ill the patient is and how much intelligence there is to de-

pend upon in measures instituted to prevent infection, and thus in the presence of little children our efforts to save the taxpayer and maintain family independence must be subservient to the protection of the children. Those who maintain that the segregation of the tuberculous is a large factor in diminishing the tuberculosis morbidity will take exception to our practice, but believing as we do, that increasing racial immunity and full bellies and better living conditions are largely responsible for the lowered and lowering morbidity we have no difficulty in reconciling theory and practice.

Also, we take into consideration, as far as may be, in sending patients away, temperament and adaptability to sanatorium life. Not always can the patient's ability to adapt themselves successfully to sanatorium life be correctly apprehended. However, for years I kept careful account of these factors in the light of end results and know that temperament is a very big matter indeed in its influence upon results. Therefore a patient should want to go and state that they are willing to undergo a rigid discipline for at least a year as a preliminary to further discussion of just where they will be sent if sent at all.

A comparison of the results achieved in incipient tuberculosis of the lungs in terms of arrest at Trudeau, Fort Bayard and the New Mexico Cottage Sanatorium under my management, shows them to be so nearly alike that there is no special advantage in sending this type of case away. Early tuberculosis under proper management and full co-operation gets well in about 80 per cent of all cases anywhere except in the tropics.

As the case becomes more advanced and is not amenable to collapse therapy help of a suitable climate becomes more insistent—stopping short, of course, of manifestly hopeless cases. Exudative cases with marked febrility should not be sent away until the temperature is controlled—they die just the same in the west as in the east, and it's cheaper and more comfortable to die at home.

Successful collapse cases when the lesion is unilateral do not require the help of a favorable climate, as the one prime essential has been met—rest of the affected part, and so we do not send this type away, but prefer to keep them under our own management. In the small proportion in which thorocoplasty and phrenectomy are applied, being much more difficult types, climatic treatment is indicated, as such

need all the help they can get. In those in which collapse therapy is only relatively successful and in which there is a certain amount of involvement on the other side we consider climatic treatment indicated.

In conclusion let me state that the tradition maintained in this office for half a century of giving those who can and should have it a better chance, in the west (selected places) than is afforded here will be applied in the future as it has been in the past.

HISTORY OF CARDIOLOGY

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History is the foundation of all teaching. For it is only by an historical appraisal that the real philosophy of anything can be appreciated or understood. And this is true of the sciences and especially so of medicine and its various specialties. Strongly impressed by some early literary masterpiece or Homeric poem, are we not prone to attribute to the ancients such superlative powers and qualities that present day generations appear pigmy in comparison? Recall the roster of your childhood heroes, your mental record of stirring events and heroic performances since time began, and you will probably at once recall the up-speaking, brave Horatius and the undying story of the Pass at Thermopylae.

ALL THINGS IN CONDITION OF FLUX

"There is nothing new under the sun!" In preparing this short history of cardiology, I have had several lessons brought very forcibly home, chief of which are that nothing in medical science is static, that ideas, conceptions, customs and technic continually change, each age stepping on the shoulders of the ages which have gone before. I have searched the scriptures of our profession, from the days of the fabled Aesculapius, down through the Galenical times, Harvey's monumental writings, on to present day literature, and I find that the only thing that has not changed, but remained the same through the centuries, is the physical structure of the human body, including the myocardium itself.

There is much that is new in medicine, much, very much, still to be known. Regarding the heart, we are only now on the threshold of real knowledge. During the last quarter of a century more progress

has been made towards arriving at a true conception of the human heart's functions than had been made in the preceding centuries. In the light of this new conception, further building on it, and aided by the latest in mechanical technic at our ready disposal, who can doubt but that progress in this specialty will be continuous.

HIPPOCRATES AND THE HEART

The history of cardiology may be divided into three periods: ancient and primitive, or pre-scientific, the period of scientific investigation, the period of scientific application. Looking back from 1928, all cardiac knowledge must have been more or less primitive even up unto the latter part of the third period. From the days when the gods were blamed for all diseases and had to be propitiated accordingly, down through the various ages, as the heart was in turn considered the seat of the soul and containing no blood, to comparatively recent times when medical men reluctantly discarded the accepted premise that a heart murmur of whatever kind was a positive danger signal, cardiac knowledge slowly progressed. To critically review medical history would be to acquiesce in Rudyard Kipling's stanza:

Wonderful little, when all is said,
Wonderful little, our fathers knew,
Half of their remedies cured you dead,
Most of their teaching was quite untrue.

To the fifth century B. C., little, if anything, from a medical point of view, was known about the heart and circulation. In these legendary times the Hellenic people attained a great degree of excellence in philosophy, poetry, sculpture and architecture, culminating in the advent of Hippocrates, the "Father of Medicine," the first of the ancients to really practice medicine. A rank revolutionist, he attributed disease to a visitation from the gods as did his predecessors, including Aesculapius, son of Apollo, chief god of healing in the Greek Pantheon, and father of the equally fabled twin daughters, Hygieia and Panacea. Hippocrates is thought to have been the first to listen for chest sounds.

THE VIEW OF PLATO AND ARISTOTLE

Then came Plato and Aristotle, the former philosophically stating that the heart was the seat of the higher emotions, while the later named the aorta, announced the heart as the seat of the soul, and without conceiving any idea of the circulatory system, believed it to be the source of the blood, to him the nutritive fluid of the

body. Praxagoras, is chiefly known as being the first to distinguish between the veins and the arteries, the latter in his opinion containing no blood. Herophilus counted the pulse and made an elaborate analysis of its rate and rhythm, while his contemporary, Erasistratus, described the auricles, valves and chordae tendinae of the heart, at the same time denying its blood content. These two, the first of the anatomists, were of the famous Alexandrian period and school, and were the last known "greats" before Galen.

GALEN CONTRIBUTES

Galen (131-201 A. D.), the founder of experimental physiology, was a disciple of Hippocrates, and the greatest of the Greeks after the "Father's" time. Of a roving disposition, he assimilated ideas from many countries, including Rome, where he at one time practised. A voluminous writer, a far-from-painstaking investigator, and a super-dogmatic teacher, yet he left an impress on medical science that was to last for many centuries. His discoveries and hide-bound theories with reference to the heart and circulation may be summarized as follows: He discovered that the arteries contained blood instead of air; he postulated the arteries as arising from the heart and the veins from the liver; diastole as the important active movement of the heart; the intraventricular septum as perforated, allowing communication of blood between the two chambers; that blood moves in both arteries and veins, though not in a continuous circulation. Galen somehow recognized the importance of the muscular element in the heart and held that the impulse for its contraction must originate within the organ. He was also the first to mention aneurysm of the aorta. His discoveries and theories regarding diverse other parts of the anatomy and on physiology and disease itself were equally as radical, and such was his standing as oracle-authority that even up to the sixteenth century, and in some cases long afterwards, most disputations on medical subjects were readily settled by quoting the never-to-be-disputed Galen. Galen was undisputed authority in medicine.

THE DARK AGES

With Galen's death in 201 A. D., ended the primitive or pre-scientific period of medicine proper. The transition to a scientific or pseudo-scientific regime was by no means rapid, for it must be remembered

that the following centuries were of the Dark Ages, when new discoveries and ideas found slow acceptance. The Byzantine period, the Mohammedan and Jewish periods followed, when knowledge was largely transmitted from mouth to ear. Approaching the fifteenth and sixteenth centuries, great universities and schools of medicine were being founded as men's minds turned towards more rational explanations of biological phenomena. More important, still, the printing press made its appearance as a means of disseminating knowledge, with the advent of which knowledge of the various sciences ceased to be the privilege of the favored few, but gradually became available to the increasing masses craving learning.

Aegidius Corboliensis in the twelfth century made an exhaustive study of the pulse (one of his manuscripts still survives in the famed Bodleian library at Oxford) and his methods of investigation closely approximate the best practices of today. Mondino de'Luzzi, sometimes known as Mundinus, in the thirteenth century, although laboring under the spell of Galen, yet ventured to doubt some of the great master's views, especially as to the intraventricular septum, and his description of heart valves anatomically, falls little short of our current conception regarding them. Then came that genius Leonardo da Vinci of the Italian Renaissance, whose artistic hand made such detailed drawings of the heart as to give him a place in the annals of medical science. His writings, too, on the valves and cardiac cycle, cannot be ignored by any heart student delving into the remote history of this specialty.

Sylvius and John Winter, early in the sixteenth century, still of the Galenical school, and unable, or at least unwilling to stray far from the teachings of Galen, stumbled vaguely on certain phases of the muscular functions of the heart to give grounds for believing that they had started a new school of cardiac thought and conception, which was to be further advanced by their illustrious pupil and eventual superior—Andreas Vesalius. This Flemish teacher of Padua dared both Galen's teachings and the Inquisition, a dual antagonism of no mean proportions. An anatomist by choice, and the greatest physician intervening between Galen and Harvey, Vesalius demonstrated the impossibility of porous communication between the ventricles, and in many other ways discredited much of Galen's heretofore ac-

cepted doctrines. His magnificent "De Fabrica Humani Corporis", a work received at the time with contumely and considered even sacriligious, nevertheless forms a milepost on the then almost trackless medical desert, and marks an epoch in breaking with the past, as it ushered in a new era in medical history. Gabriele Falloppio, who described the Fallopian tubes, was one of Vesalius' most famous and most loyal pupils.

INVESTIGATION BY SERVETUS

Michael Servetus, in the sixteenth century, discovered that the blood in the pulmonary circulation passes into the heart after having been mixed with air in the lungs, while his contemporary, Realduus Columbus, demonstrated the blood content of the pulmonary veins, even though he did not discard Galen's ebb and flow conception of the circulation. Brissot and Fabricius were other notable pathfinders of these times, as was Andrea Cesalpino, the first named being known as a reformer in the practice of venesection as a therapeutic aid in an embarrassed circulation, while the last named, in pure theory and without accompanying experiment, thought that the heart, in systole, sends blood into the aorta and pulmonary artery, and in diastole receives it back from the vena cava and pulmonary vein. And this theory was soon to be demonstrated in convincing fashion by the greatest medical mind since Galen's time.

Fabricius described in detail the valves of the veins, and showed them to be turned towards the heart. Fabricius' place in medical history, however, does not rest solely on what he did in the realm of cardiac discovery. He was a teacher of great influence as well. Fabricius was William Harvey's teacher at Padua from 1599 to 1603.

HARVEY'S DE MOTU CORDIS

Harvey belonged to the seventeenth century, the age of Shakespeare, Milton, Newton, Bacon, Halley, Raleigh, Sidney, Sir Christopher Wren—the age of the Spanish Armada—the golden Elizabethan age. And well worthy is this giant of medical science to stand compeer with the greatest literary, poetic, philosophical and scientific minds of that most glorious period of all English history. Harvey broke away entirely from the Galenical theories of anatomy and dealt with visible, practical facts, instead of vague speculations. His great contribution to medical science was, of course, his discovery that the heart

acts as a muscular force pump in propelling the blood along in continuous circular motion and that the actual quantity and velocity of the blood, as computed by him, make it physically impossible for it to do otherwise than return to the heart by the venous route. This discovery was in truth momentous. It rendered obsolete the teachings and theories of blood circulation since time began. It was in fact the foundation of modern physiology. Later, Harvey proved the impermeability of the intraventricular septum, also the fact that the blood passes through the lungs. Having no microscope, he failed to demonstrate the capillary circulation, as was done by Malpighi a little later, of whom it has been said—"He made a histological certainty of what Harvey made a logical necessity."

With Harvey began the real period of scientific application, and at his demise in 1657 progress in the science of cardiology was well begun. According to present day standards the evolvement of this new regime may appear slow. Yet, one must consider the times, the technical knowledge and mechanical equipment at the command of the then investigators, and with Kipling again I think you will agree when he adds this postscript to the stanza already quoted:

"Yet when sickness was sore in the land,
When neither plant nor herb assuaged,
They took their lives in their lancet hand,
None too learned, yet nobly bold,
Into the fight went our fathers of old."

Harvey was bold, not with the boldness of the venturesome, self-opinionated and self-appointed medical oracle, but with the assurance that his discoveries defied the minutest scientific tests. His followers seem to have absorbed some of that quiet, confident zest for further discovery that was so notably his, and as new fields of knowledge were charted they, too, were not slow to assert their claims.

BORELLI STUDIES NERVE MECHANISM

Borelli, closely following, applying the precepts of his mathematical teacher, Galileo, to what he had learned from Harvey, attempted the calculation of the contraction power per unit volume of the chambers of the heart, and even went so far as to suggest the neurogenic origin of the heart beat. Stensen, the Dane, followed with his statement that muscular contraction was independent of arteries, veins and nerves, while the Cornishman, John Mayow, added yet other important chap-

ters to cardiac knowledge with his experiments on respiration. He was the first to dissipate the idea that fermentative explosion had anything to do with the ejection of the blood content of the ventricles, asserting that this physical phenomena was the result of the contraction of the ventricle and that alone.

One of the founders of the Royal Society of London, and a president of the Royal College of Physicians, Francis Glisson, (1597-1677) first introduced the term "irritability" into the vocabulary of physiology. He also made investigation into the muscular contraction of the heart. The Papal physician, Lancisi, in certain of his writings, noted hypertrophy and dilatation of the heart as causes of sudden death. He was the first to describe valvular vegetations and cardiac syphilis, and attempted a classification of cardiac diseases. In the light of the modern polygraph, it is important to note here that he also described in some detail the cervical veins.

Giovanni Battista Morgagni of Forli, afterwards the incumbent of Vesalius' chair at Padua, made a still further important contribution to heart science. He was the first of all medical writers to attach importance to physical signs in the diagnosis of chest conditions. The foremost pathologist of his time, his descriptions of valvular lesions are classic, and it is believed he was the first to recognize heart block. It is appropriate that he should have been trained at Padua, as Vesalius and Harvey were.

About this time we have the work of Richard Lower, whose descriptions of heart structure exceeded all previous studies in accuracy; Stephen Hales, whose experiments in horses advanced the accurate measurement of blood pressure; the physiologist, Albrecht von Haller, who, in addition to elaborating on Glisson's theory of "irritability" demonstrated experimentally the myogenic theory of the heart beat. In the early part of the eighteenth century, Senac established himself as a cardiologist and he wrote voluminously on the heart. Besides attempting to enumerate the then known diseases of the heart, he made the somewhat modern observation that signs and symptoms observed in the living are not always verified in post-mortem examination.

Auenbrugger of Vienna lived during the latter part of the eighteenth century; his name rests principally on his discoveries in percussion. Following him was that

most lovable English clinician, William Withering, the pioneer in the use of digitalis, whose name can no more be disassociated from a history of cardiology than can Harvey's or that of Sir James Mackenzie. Withering's experiments in digitalis dosage led him to the declaration that to produce the desired results the drug should be given to the point of producing nausea—i. e.—in full physiological amount. In the old Edgbaston church near Birmingham, this famous therapist was laid to rest in 1799, and to this day his grave can be seen with the foxglove worthily adorning his monument.

THE NAPOLEONIC PERIOD

The roster of French medicine of the Napoleonic era lists such names as Corvisart, Laennec, Dupuytren, Cuvier, and the surgeon, Larrey. Jean Nicolas Corvisart was Napoleon's favorite physician, and the "Little Corporal" had the rare faculty of recognizing, employing and rewarding outstanding ability when he saw it. Corvisart called himself a heart specialist—the first of his specialty. His works on diseases of the heart were possibly ahead of his times, and his statement that "upon the muscular efficiency of the heart depends life itself," has a resounding ring of modernism. By improving upon and clarifying Auenbrugger's theory of percussion, Corvisart is best known to medical science. He made of percussion a fascinating art. Occupying for many years the chair of Clinical Medicine in Paris, his fame as a teacher was such that students from all countries flocked to his classes, making of the French capital the medical mecca of the world, as it was then the military and political center. Laennec was a pupil of Corvisart and his claims to inclusion among cardiac students are twofold; he invented the stethoscope, and wrote one of the most important treatises on diseases of the thoracic organs yet known. He was indeed the first to put the diagnostic sounds of cardiac and pulmonary diseases upon a reliable basis, and also the first to describe and differentiate bronchiectasis.

With these two illustrious investigators, France, however, did not cease to contribute to cardiology. Bouillaud made valuable studies on valvular murmurs, mentioned gallop rhythm, and coined the expression "endocarditis." Poiseuille invented the mercury manometer for measuring blood pressure, and fixed the basis for determining the viscosity of the blood,

while Pierre Louis is understood to have been one of the first to use a watch for timing the pulse. Later, Marey perfected the sphymograph, the forerunner of the polygraph.

Meanwhile a school of advanced thought in cardiac matters was claiming attention in Ireland, where in Dublin, William Stokes and Dominic John Corrigan were blazing a trail all their own. Stokes made an exhaustive study of valvular lesions and "fatty degeneration." His name is, of course, associated with the type of heart block known as Stokes-Adams disease. Corrigan was particularly interested in the circulation, describing the collapsing pulse of aortic insufficiency which bears his name.

In England, Richard Bright's work on nephritis brought him within the domain of cardiology, while Hodgson, besides making a contribution on aneurysm, wrote on vascular diseases. James Hope, too, contributed by his investigations on auscultation which helped to place it on a sounder basis. Hope studied valvular murmurs with great care, bringing out the meaning of regurgitant murmurs.

Wilhelm His, the discoverer of the bundle of fibres forming part of the conduction system of the heart, was another of the eminent cardiologists of the nineteenth century, as were Weber and Ludwig, with their discoveries on the vagus.

The scene shifts to America, where Da Costa made a special study of "irritability". This brings us nearer to the present and to other noted men in this specialty. Electricity now serves the heart physician in his work. Matteucci first suggested measuring electric currents of the heart, Kolliker and Muller further experimented in this direction, and finally William Einthoven of Leyden invented the string galvanometer, which in its perfected state has been of incalculable assistance in analyzing and even diagnosing various heart conditions, especially the arrhythmias.

THE WORK OF MACKENZIE

Such has been the history of cardiology—a groping after knowledge through the centuries. For the most part progress has been slow, with here and there flashes of brilliancy in an otherwise rather dark firmament—Galen, Vesalius, Harvey, the major stars. The nineteenth century saw the dawn of real progress, the twentieth, the culmination of the summum of all that had been acquired before. The last

quarter century can boast of achievements greater in number and value than had been attained in all previous history. Our current conception of the heart in health and disease is largely the result of labor performed in this field since the beginning of the present century. To one worker in particular can be attributed much of the credit, that very able scientist and wise philosopher, Sir James Mackenzie, the "Father of Modern Cardiology."

Mackenzie's achievements are so well known to the profession that little need be said of them beyond recapitulation—he was the pioneer in the graphic study of cardiac disease, and was the first to make simultaneous records of the arterial and venous pulses to elucidate the clinical condition of the heart. His eternal question—"How much work can the heart do?" turned cardiac study and investigation into the channels revolving around the energetics of heart muscle. He was the first to investigate arrhythmias, and differentiated the "nodal rhythm," now called "auricular fibrillation." Although MacKenzie differentiated "nodal rhythm" now called "auricular fibrillation" all heart students know that the a.v. node may supercede the sinus and assume the function of the pacemaker, and that a circulating wave is responsible for "auricular fibrillation." At the same time he did much towards standardizing the proper medication of heart diseases.

What manner of man was this Scotchman, who became the leading cardiologist of his time, yet first, last and all the time retained his standing as a general practitioner? To him, that was a proud distinction. An appraisal of the man makes his scientific achievements all the more understandable. His early studies were uneventful. He graduated from Edinburgh without showing any particular ability and went to the town of Burnley in the north of England, to act as assistant to Dr. William Briggs. If he had one outstanding characteristic, it was that of an essentially reasoning mind. Mackenzie became a general practitioner with seemingly no opportunity for specialization or fame beyond the confines of the parish he helped to serve. Dr. Briggs had the "clinical sense." He knew the "face of disease," without being able to impart to his assistant or anyone else the reasons why certain pictures represented to him certain human afflictions. Dr. Briggs could readily express an opinion about the prospects of a patient showing a given picture of

disease, and the young Mackenzie's reasoning mind continually raised the question of how Briggs knew this. His answer could not be found in text books. In after years none knew the "face of disease" better than Mackenzie, and what is of more importance, he could interpret it clearly to others.

The meaning of signs and symptoms in terms of the patient's future safety was his all concern. The answer was to be found in personal investigation, and this probing of the unknown, this search for what each symptom meant in the present and for the future was only solved when he came to the conclusion to "wait and see" what happened to the patient with the symptom. And this meant investigation and carefully kept records for Mackenzie's lifetime. Accumulated experience held the answer to the secret of Dr. Briggs' inward clinical sense. Accumulated experience and an understanding of the mechanism of symptoms and their prognostic significance was the great secret which guided Mackenzie to signal success. This country doctor became a master of research, not in a laboratory nor in an hospital with the latest equipment and appurtenances, but in the lives of his neighbors with whom he came in contact frequently over a long term of years.

A case of sudden heart failure in child-birth induced him to give careful attention to the heart. He awoke to the fact that in this case he had failed to recognize the meaning of certain symptoms. The text books gave him no clue. But accumulated experience did, although not immediately. About this time he acquired a pulse writer and began to study the tracings of irregularity, with particular anxiety to determine which among the different waves were dangerous and which safe. It took many years of comparison and observation, as well as a new machine invented by himself—the polygraph which recorded the throbbings of blood vessels in the neck—to answer the questions. His chief difficulty lay in interpreting the waves. Eventually Mackenzie succeeded. In turn he found out not merely how the heart as a whole beats, but how two separate chambers were beating, that the chambers sometimes fail to keep step with each other, and often beat out of their correct and proper order, hence the extrasystole. His discovery at first excited no special comment. In fact, the manuscript describing this and other important observations failed of publication in any re-

putable medical journal. Could any good thing come out of general practice? Editors and recognized cardiac specialists seemed to think not.

But this general practitioner plodded on, serene in the belief that he was getting at new truths. He was still trying to find out how symptoms of ill health were produced, and still waiting to see what would happen to human beings who showed those symptoms. He strove to discover the secret of irregular heart action, and his machine was but an aid to that solution and subordinate to it. In possession of his tracings and complete records and notes of symptoms, he was able to know, as he identified each type of irregularity, the importance of it as a sign of impending trouble, by re-examining the patient at intervals. Later, when new patients came to him with that particular symptom of irregularity, he was in position, out of accumulated experience, to make an accurate prognosis. His declaration that an extrasystole was of no serious consequence was received with indifference by the profession at large, and with derision by the specialists.

He identified and named another irregularity—the youthful type—and his experience told him that it was physiological and not harmful. Such prognosis was the result of many years of patient observation; he had the opportunity of seeing people in childhood; he watched children grow up and pass into manhood and womanhood, and observed how they bore themselves during periods of stress, at play and in hard work, and the symptoms observed were compared with those in people with failing hearts.

THE STUDY OF THE PULSE

In the same way, Mackenzie discovered later the dangerous type of irregularity, now known as auricular fibrillation, and he differentiated between murmurs that have no significance and those that mean danger. He was becoming the greatest heart specialist in the land, but years were yet to pass before he could obtain official recognition. He had come to the conclusion that the true nature of heart failure, as he knew it, was not understood by recognized heart specialists. These "giants" were acting on opinions which this country doctor from Burnley knew to be wrong. They viewed with grave anxiety cases which he regarded as trivial, and vice versa. And he was not slow to voice his opinions in the matter wherever he could

find audience. In the year 1902, being denied publication in the press of the profession, he published on his own account his first book—"The Study of the Pulse." It went forth unperceived by the "giants," but it received recognition in Germany and in America, whence medical men came to meet this rising authority. "Mackenzie, we know him not," said the English authorities in high places, with the taint of general practice still in their nostrils. "Away with him, we can have naught to do with a general practitioner."

Mohammed refusing to come to the mountain, the mountain decided to move into Mohammed's bailiwick. Mackenzie went to London to engage in special practice. His first year there was devoid of professional success, but he completed and put on the market his great book, "Diseases of the Heart," which fell among the "giants" with all the disturbing effects of an explosive bomb. It sold. And a second edition was required the following year. It was the medical text book of many years, and being of immediate practical utility, it found favor with general practitioners everywhere. With this thrown gauntlet, Mackenzie found himself famous overnight. He had acquired giantship; he was, in fact, the "giant" of them all. Those authorities at whose doors he had knocked these many years finally awoke to the fact that here was a man with a message that brooked no further denial, and they afforded him tardy recognition. "Was not this the inventor of the polygraph? Honor and recognition was due on that account." But due recognition was not then given him for his new and radical conception of cardiology. That was to come, but not without a typical Mackenzie fight for it.

Sir James Mackenzie went from success to success as a recognized heart specialist. Called self-opinionated and dogmatic, he lived to see his opinions prevail, and the Mackenzie school of thought in cardiology arises as a vital and original conception of medicine. He criticized and spoke as he felt impelled to do, and he was merciless in attacking error when he found it. Never did he forget his days as a general practitioner. General practice to him was the one and only place where he could serve best and learn most. He went back to it in his declining years—back to St. Andrews in Scotland, where he founded an institute for clinical research, where symptoms of the onset and progress of disease could be observed under the most

favorable conditions. It is his monument, if monument is needed for the creator of a new conception in understanding human suffering.

The story of Sir James Mackenzie's career is but that of the development of the specialty of cardiology from a somewhat vague, hit-or-miss to an intensively scientific branch of medicine. Galen, Vesalius, Harvey. To this trio of immortals who labored long and honorably to further cardiac knowledge, may well be added a fourth. The Man of Burnley is possibly too near to us for proper appraisal, yet in our day and generation he must take the leading rank in a galaxy of outstanding heart men.

There yet remains a vast unfinished work in cardiology. Sir Thomas Lewis in England carries on, as do numerous well qualified men in France, Germany, and particularly in America. Many problems have yet to be solved, and it is not beyond the bounds of possibility that many far-reaching discoveries will be made within the span of your life and mine. Even now the stage is set for the denouement of important work in process. A proper appraisal of the cardiac muscle is long overdue. That was the Man of Burnley's goal. Much he did to set us on the right scent, and we will be deficient as strivers after scientific advancement and achievement if we fail in the quest that he so nobly began. We need a mechanical device to accurately test the strength of the myocardium. We need a formula that will tell the cardiac sufferer just how much and what kind of work he may safely do. We need heart men, with knowledge and understanding of heart energetics who can say with confidence to the cardiac sufferer, "this much and no more can you do."

ORDER OF BIRTH AS A FACTOR IN EPILEPSY

WYONA GREEN, Psychiatric Social Worker
Michigan Farm Colony for Epileptics

The statement has been advanced by a number of workers on epilepsy, that the first born in a family is predominantly likely to be the epileptic child in the family.

This has been explained on the basis that the first child is not borne so easily as later children and, therefore, is more likely to birth injury. The argument has also been put forth that in more instances the first child is unwanted and in more instances efforts are made to produce

abortion and miscarriage, thereby subjecting the child to intrauterine damage.

Dr. G. F. Still states that statistical evidence obtained from the department of pediatrics, of King's College, London, England, shows that the first born child in a family is more likely to have certain malformations of mind and body than later born children, and that such malformations are not likely to recur in later births.

Riddock states that in epileptic families there are a greater proportion of epileptics among the first born than those born later.

At Craig Colony, Sonyea, New York, 2,000 cases were studied, showing that 6 per cent were only children, and that 25.6 per cent were first born.

It has also been asserted that the later children in large families are liable to physical or mental weakness. The explanation of this is stated to be that in the production of a large family of children there is an exhaustion or depletion of stock with resulting enfeebled offspring.

Presuming that 1,000 consecutive cases would show sufficient findings to conclude whether or not the order of birth is a factor in epilepsy, a study was made of 1,000 cases of families of two or more children, from the files of this institution.

The histories of one-child families were disregarded on the basis that histories of one-child families did not prove anything definite.

The histories were taken in groups of

Order of Birth	TABLE SHOWING ORDER OF BIRTH OF 1,000 EPILEPTIC ADMISSIONS																	
	Children in family																	
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
1st	61	44	50	25	23	10	13	6	5	1	1	0	1	0	0	0	0	240
2nd	35	42	28	22	26	18	12	9	4	3	5	0	0	0	0	0	1	205
3rd		38	32	28	20	20	13	11	12	3	4	1	0	0	0	0	0	182
4th			44	19	21	9	7	5	3	4	3	0	2	1	0	0	0	118
5th				21	13	27	12	8	6	2	3	1	0	1	0	0	0	94
6th					13	10	9	8	0	4	0	0	0	0	0	0	0	44
7th						12	6	8	9	2	1	0	0	1	0	0	0	39
8th							9	6	1	2	4	1	0	3	1	0	0	27
9th								7	5	1	1	1	0	0	0	0	0	16
10th									6	6	2	1	1	0	0	0	0	16
11th										5	2	1	1	1	0	0	0	10
12th											3	2	0	0	0	0	0	5
13th												2	1	0	0	0	0	3
14th													1	0	0	0	0	1
Total	96	124	154	115	116	106	81	68	51	33	29	10	8	7	1	0	1	1,000

ILLUSTRATION—Among the one thousand families, there were 51 families of ten children each.

In the ten-children families, the epileptic child was the—

1st born in 5 instances.	6th born in 0 instances.
2nd born in 4 instances.	7th born in 9 instances.
3rd born in 12 instances.	8th born in 1 instance.
4th born in 3 instances.	9th born in 5 instances.
5th born in 6 instances.	10th born in 6 instances.

Table No. 1

Order of Birth	TABLE FORM GIVING ORDER OF BIRTH OF 1,000 FEEBLE-MINDED ADMISSIONS																	
	Number in family																	
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
1st	73	48	47	32	15	11	8	4	2	1	0	0	0	0	0	0	0	241
2nd	74		38	24	18	13	9	9	1	1	1	1	0	0	0	0	0	231
3rd		60	35	30	19	12	9	6	1	2	3	1	1	1	0	0	0	180
4th			40	18	15	15	7	7	3	1	2	1	0	0	0	0	0	109
5th				27	12	9	11	6	5	1	3	0	0	0	0	0	0	74
6th					21	18	6	6	6	1	0	0	0	0	1	0	0	59
7th						11	3	6	6	2	2	1	0	1	0	0	0	32
8th							8	5	1	5	2	2	1	0	0	0	0	24
9th								8		1	3	2	0	1	0	0	0	15
10th									10	3	2	2	0	0	0	0	0	17
11th										4	3	0	0	0	0	0	0	7
12th											5	2	0	0	0	0	0	7
13th												1	1	0	0	0	0	2
14th													1	0	0	0	0	1
15th														0	0	0	0	0
16th															0	0	0	0
17th																0	0	0
18th																	1	1
Total	147	150	160	131	100	89	61	57	36	24	25	11	5	2	1	0	1	1,000

ILLUSTRATION—Among the one thousand families, there were 57 families of nine children each.

In the nine-children families, the feeble-minded child was the—

1st born in 4 instances.	6th born in 6 instances.
2nd born in 9 instances.	7th born in 6 instances.
3rd born in 6 instances.	8th born in 5 instances.
4th born in 7 instances.	9th born in 8 instances.
5th born in 6 instances.	

Table No. 3

100 each, and the totals compiled in the tables shown at the completion of this article. Of the 1,000 cases studied, 24 per cent were found to be first born. As an illustration:

In the 96 families of 2 children each, 61 were first born and 35 were second born.

In the 51 families of 10 children each, 5 were first born; 4 were second born; 12 were third born; 3 were fourth born, and 6 were fifth born. There was not any sixth born; 9 were seventh born; 1 was eighth born; 5 were ninth born, and 6 were tenth born.

Of one family of 18 children the epileptic child was second in order of birth.

The order of birth and number of children in the family will be found in the accompanying table.

Were we to limit our conclusions to the two-children families, we would have to declare that the first born child has almost twice the risk of being epileptic as the second child, but as we go on with the study, into the families of more than two children, the predominant occurrence of epilepsy in the first child, as compared with later born children disappears. This is quite nicely illustrated in the 33 families of 11 children each, and in the 29 families of 12 children each. It will be observed that in each group, there was but one first born child afflicted.

A table compiled by Dr. Kay of the Michigan Home and Training School for the Feeble Minded, showing the order of birth of 1,000 feeble-minded admissions, shows but very little variation from the table compiled of 1,000 epileptic admissions.

Disagreeing with certain writers who claim that defective children are more apt to occur in large families than in small families, the tables compiled of 1,000 epileptic admissions and the table compiled of 1,000 feeble-minded admissions show a decided decline in the average number of

afflicted children among children coming from the larger families.

The accompanying tables and charts are self-explanatory and are offered without further comment.

TABLE SHOWING ORDER OF BIRTH OF FEEBLE-MINDED CHILD AMONG 7,217 CHILDREN IN 1,000 FAMILIES

Out of 1,000	1st born	241 were feeble minded—24.1%
Out of 1,000	2nd born	231 were feeble minded—23.1%
Out of 853	3rd born	180 were feeble minded—21.1%
Out of 803	4th born	109 were feeble minded—13.5%
Out of 653	5th born	74 were feeble minded—11.3%
Out of 522	6th born	59 were feeble minded—11.3%
Out of 422	7th born	32 were feeble minded— 7.5%
Out of 333	8th born	24 were feeble minded— 7.2%
Out of 272	9th born	15 were feeble minded— 5.5%
Out of 215	10th born	17 were feeble minded— 7.9%
Out of 179	11th born	7 were feeble minded— 4.0%
Out of 155	12th born	7 were feeble minded— 4.5%
Out of 144	13th born	2 were feeble minded— 1.4%
Out of 139	14th born	1 was feeble minded— 0.7%
Out of 134	15th born	0 were feeble minded— 0.0%
Out of 132	16th born	0 were feeble minded— 0.0%
Out of 131	17th born	0 were feeble minded— 0.0%
Out of 130	18th born	1 was feeble minded—0.71%
Total	7,217	1,000

Table No. 4

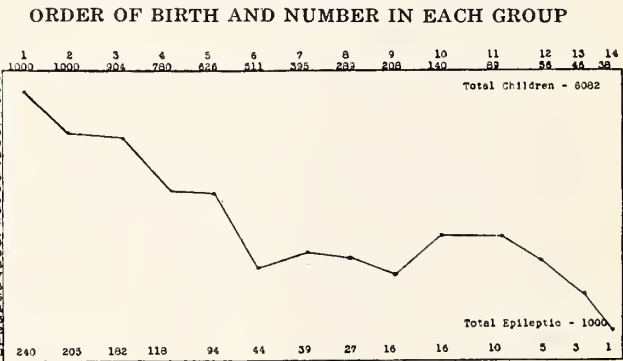


Chart No. 1.

Illustration—Among 6,082 children, including 1,000 epileptics, there were 626 fifth-born of whom 94 (15%) were epileptic.

Chart showing a study of 6,082 children, including 1,000 epileptics; the number of children in each order of birth group; the number of epileptics in each order of birth group; the percentage of epileptics by order of birth.

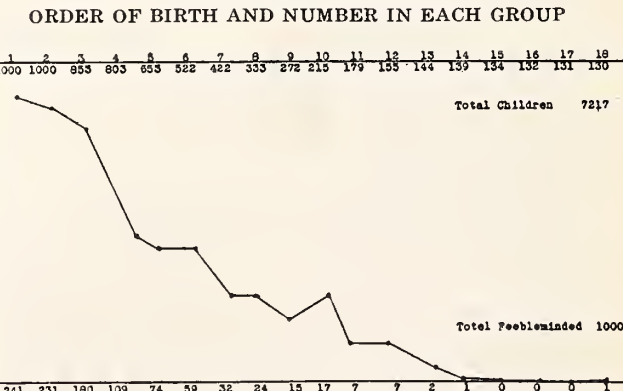


Chart No. 2.

Illustration—Among 7,217 children, including 1,000 feeble-minded, there were 803 fourth-born children, of whom 109 (13.5%) were feeble-minded.

Chart showing a study of 7,217 children, including 1,000 feeble-minded; the number of children in each order of birth group; the number of feeble-minded in each order of birth group; the percentage of feeble-minded by order of birth.

TABLE SHOWING ORDER OF BIRTH OF EPILEPTIC CHILD AMONG 6,082 CHILDREN IN 1,000 FAMILIES

Out of 1,000	1st born	240 were epileptic—24.0%
Out of 1,000	2nd born	205 were epileptic—20.5%
Out of 904	3rd born	182 were epileptic—20.0%
Out of 780	4th born	118 were epileptic—15.2%
Out of 626	5th born	94 were epileptic—15.0%
Out of 511	6th born	44 were epileptic— 8.6%
Out of 395	7th born	39 were epileptic— 9.8%
Out of 289	8th born	27 were epileptic— 9.3%
Out of 208	9th born	16 were epileptic— 7.7%
Out of 140	10th born	16 were epileptic—11.4%
Out of 89	11th born	10 were epileptic—11.2%
Out of 56	12th born	5 were epileptic— 9.0%
Out of 46	13th born	3 were epileptic— 6.0%
Out of 38	14th born	1 was epileptic— 2.7%
Total	6,082	1,000

Table No. 2

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner*

THE ECONOMIC SIDE OF IMMUNIZATION OR TREATMENT

At a recent meeting of physicians the suggestion was made that if various immunization programs sponsored by various public health agencies were carried to their logical conclusion it would have the effect of curtailing the amount of medical practice available to physicians. In this connection there are several well established facts to be kept in mind.

No immunization program yet proposed in Michigan has been made sufficiently complete to reduce the sickness or death rate of the state as a whole. Local immunization in towns, schools or institutions have been the direct cause of the total absence of smallpox and diphtheria in these restricted areas. The county medical societies of four counties sponsored the immunization of all the school children of their respective counties. The result was a reduction of one-half the diphtheria deaths. In spite of the years of demonstration of the effectiveness of vaccine virus, over 500 cases of smallpox occur annually in this state; it is plain to see that the complete elimination of any of these diseases from this state is not an end near at hand.

The making of people immune to disease is the field of the private practitioner of medicine. Only in cases of indigency, emergency or for the demonstration of its value to the public is it sound policy for public health departments to do this work. Therefore, when this desirable state of immunity is conferred upon people it will be the direct result of the services of their own physicians.

Let us see, then, what the cold figures concerning this type of practice show.

In this state there are 100,000 people born annually. They are practically all susceptible to diphtheria from the moment they are born. They are highly susceptible from the age of six months until they are immunized. If these infants were all immunized, and for this service the physicians received from \$5.00 to \$10.00 per case, the net income would be from \$500,000 to \$1,000,000. Michigan has 5,000 cases of diphtheria annually. If the physicians received for their services, exclusive

of all other costs, an average of \$50.000 per case the income from this source would be \$250,000. The increase in physicians' income from diphtheria would be from one-quarter to three-quarters of a million dollars, if we would immunize all children against this disease soon after they are six months of age, instead of waiting until they are stricken with the disease and then treating them.

Some maternity hospitals are vaccinating with vaccine virus all babies born in their institutions. Babies under ten days old very seldom have any general reaction and the immunity usually lasts for the whole lifetime of the individual. It is estimated that one-third of all births in this state occur in hospitals. If all hospitals were to establish this rule as part of their regular procedure, it would mean an addition of 30,000 immunized people in the state each year and an additional income of at least \$60,000 to the physicians or hospitals.

When the 100,000 people born every year in Michigan are vaccinated against smallpox at birth, the income to the physicians would approximate \$200,000. The 500 cases of smallpox that occur every year, treated at an average of \$50.00 per case, bring physicians \$25,000. Thus the physicians, by adopting the practice of vaccination at birth, would increase their income by nearly \$200,000.

We have taken diphtheria and smallpox as examples of the economic advantage of immunization, but the same conditions apply to other diseases and to other public health measures.

With persistent educational work by the physicians and the Michigan Department of Health, these immunization programs will succeed in reducing the number of these preventable diseases and increasing the earning of the physicians who actively sponsor this modern type of practice.

SUMMER RESORTS

Summer resorts, and their proper sanitary supervision, have come to be a topic of perennial interest to everyone concerned with the public health. The increasing tendency to migrate during the warm weather—and the modern facility of mi-

gration—are largely responsible. The “back to nature” urge has never had such an easy outlet, and the resort business has boomed in consequence.

Leaving the matter of sanitary safeguards to the vacationist himself, has not proved successful, judging from the amount of vacation typhoid. The serene assurance with which the average person leaves his carefully supervised environment and accepts unquestioningly the surroundings of the chance resort is nothing short of phenomenal. The very citizen who would protest most vigorously any laxity in the supervision of his municipal water supply, or garbage collection, or sewage disposal, may be the one who blithely takes his family to “Dew Drop Inn” where they drink surface water from a shallow well near a makeshift toilet. Divine Providence works overtime in summer, but even so, the typhoid rate goes up.

A great deal of improvement has been made in the sanitation of summer resorts during the past seven or eight years. The various resort associations have been keenly interested, and the average vacationist is becoming better and better informed. More or less intensive inspections have been carried on by the Bureau of Engineering of the Michigan Department of Health during all of this period. For three summers a fully equipped laboratory truck was in the field, testing water and milk samples and inspecting waste disposal. The educational effect was undoubtedly good.

This summer, resort inspection has been started in the southwestern part of the state and the route will lead north from there. To show the items covered we reprint the inspection blank.

RESORT SANITATION REPORT
Michigan Department of Health

NAME OF RESORT _____
Owner _____ Manager _____
Body of Water _____ County _____ Township _____
Post Office _____
Size _____ People Interviewed _____

DRINKING WATER
Source _____
Well or Spring Construction _____
Remarks and Recommendations _____

PRIVIES
Type _____ Fly-tight _____ Use of lime or earth _____
Danger to Water Supply _____ Depth to Water Table _____
Recommendations _____

GARBAGE
Cans _____ Disposal _____ Flies _____
Recommendations _____

FISH CLEANING
Offal, how disposed _____ Fly-tight _____ Flies _____
Recommendations _____

BATHING BEACH
Polluted _____ How _____
Beach _____
Remarks _____

MILK SUPPLY
Stable _____
Manure _____
Cattle Tested _____
Recommendations _____

CAMP SITE
General Description _____

GRADE
Water Supply _____ Fish Cleaning _____ Buildings _____
Privy _____ Flies _____ Camp Site _____
Sewage Disposal _____ Bathing Beaches _____ General Opinion _____
Stream Pollution _____ Food Report _____ Character _____
Garbage Disposal _____ Milk Supply _____ Letter Recommended _____
Inspector _____
Date _____

CHILD HYGIENE FOR 1927-28

Activities of the Bureau of Child Hygiene and Public Health Nursing for the fiscal year ended June 30, 1928, have been almost entirely educational. Classes in child care for both adult and school groups, supervised study clubs, lectures to general audiences, surveys, and demonstration programs have made up the year's work. In all, 30,115 persons have been reached through these activities.

As in preceding years, classes have been conducted for women by a traveling unit made up of a physician and a nurse. These classes consisted of lectures and demonstrations on prenatal, infant, and child care. For the year just ended, nine counties have been visited, Presque Isle, Alpena, Antrim, Kalkaska, Manistee, Lake, Macomb, Livingston and Kalamazoo. The total attendance at the classes was 6,009.

Courses of study in child care have also been carried on for girls from ten to sixteen years of age. These are usually known as Little Mothers' Leagues, from their early predecessors in New York City. These also consist of lectures and demonstrations, and the total enrollment for the year in leagues conducted by department public health nurses was 6,263. These were held in Menominee, Otsego, Montmorency, Alcona, Crawford, Iosco, Lake, Huron, Muskegon, Ottawa, Clinton, Shiawassee, Jackson, and Kalamazoo counties. Such classes were carried on by local public health

nurses in Alger, Alpena, Wexford, Oceana, Ionia, Kent, Genesee, Allegan, Ingham, Oakland, Wayne, Washtenaw, Calhoun, Berrien and Cass counties. The attendance at these classes is not a matter of department record since they are a local activity and, aside from furnishing material for them, the department has no share in them.

A new type of work was begun this year in the form of self-directed study clubs. A representative of the Bureau of Child Hygiene and Public Health Nursing organizes the groups and instructs the local leaders. Outlines and references are furnished by the bureau, with special additional material for the leaders. This has proved to be a very popular service. Such clubs have been at work in Gogebic, Menominee, Baraga, Dickinson, Oceana, Marquette, Mecosta, Midland, Lapeer, Clinton, Ionia, Kent, Livingston and Monroe counties. A total of 236 classes have had an attendance of 4,595 women.

Breast feeding surveys have furnished a very direct avenue for the education of mothers in twelve counties. Where such surveys have been conducted, the approval of the physicians of the county has first been secured, and then home calls on the young mothers have been made by the public health nurse assigned. In Chippewa, Ontonagon, Missaukee, Schoolcraft, Alcona, Mackinac and Charlevoix counties, breast feeding surveys have been completed during the past year, and in Houghton, Arenac, Crawford, Menominee and Montcalm counties they are still in operation. A total of 1,671 mothers have been visited during this time.

Demonstration work in prenatal nursing has been carried on in three counties, Emmet, Grand Traverse and Saginaw. The program in Emmet County was completed in December, 1927, and in Grand Traverse and Saginaw counties work is still in progress. These programs have been entirely under the supervision of the local doctors, started with their approval and carried on under their direction. A total of 2,006 visits, prenatal and postnatal, were made by the public health nurses assigned to the counties, upon 613 women. Two thousand nine hundred and ninety-six visits were made to mothers of young infants.

In addition to the regular class work, 256 talks were given by members of the staff of the Bureau of Child Hygiene and Public Health Nursing to general audiences totalling 10,964.

LABORATORY STAFF CHANGES

Several bacteriologists have recently joined the laboratory staff. Among them are Miss Mary Crowley who received her degree of Master of Science in Public Health from the University of Michigan and who did considerable research there in the School of Dentistry; Miss Emily Rickey who received her Bachelor of Arts degree at Cambridge University, England, and who has been studying toward a Certificate in Public Health at Massachusetts Institute of Technology, Boston; Miss Harriette Kibbe who has received her Bachelor of Science degree from Simmons College, Boston.

Miss Helen Bingham, who has been in charge of the Biological Distribution of the Michigan Department of Health, has resigned and will leave August 1st.

LABORATORY VISITORS

During June and July, Fellows of the Rockefeller Foundation have been spending several weeks in the Lansing laboratory, observing public health laboratory procedure and administrative practice. Dr. C. V. Natarajan, assistant at the Government Public Health Institute, Bangalore, India; E. H. Bramhall, director of the State Laboratory, Salt Lake City, Utah, and Miss Edith Kuhns, bacteriologist in the State Board of Health, Helena, Montana, all studied the methods used by these laboratories in their bacteriological and serological work.

Four doctors representing Sofia, Bulgaria, Madrid, Spain, Warsaw, Poland, and Japan spent a few hours going through the laboratory as observers.

VISITS OF ENGINEERS DURING MONTH OF JUNE, 1928

Inspections of Railroad Water Supplies: Total 19.

Alpena	Mackinaw City
Bay City (4)	Monroe
Detroit	New Buffalo
Frankfort	Petoskey (2)
Lansing (4)	Traverse City (3)

Inspections and Conferences, Sewerage and Sewage Disposal: Total 63.

Adrian (2)	Grand Blanc
Ann Arbor	Greenville (3)
Boyne City	Grosse Pte. (2)
Cambridge Jct.	Hastings
Caro (2)	Hillsdale (2)
Clio	Imlay City (2)
Croswell	Ithaca
Ecorse (2)	Kent City
Farmington	Lapeer (3)
Flint (4)	Mason (2)
Fordson (2)	Muskegon Hts. (2)

Nine-Mile Road (2) Saginaw
 Northville (2) Sandusky (4)
 Plymouth (2) Sparta
 Pontiac (2) St. Clair
 Rochester (2) Trenton
 Romeo (3) Webberville
 Royal Oak (2) Ypsilanti

Inspections and Conferences, Water Supplies: Total 10.

Blissfield (2) Ionia (2)
 Boyne City Quincy
 Grand Ledge Rockford (2)
 Grand Rapids

Inspections and Conferences, Stream Pollution: Total 12.

Cambridge Jct. Kent City (3)
 East Lansing (4) Marysville
 Fairview Muskegon Hts. (2)

Inspections and Conferences, Swimming Pools: Total 4.

Kalamazoo (2) Saginaw
 Lansing

Inspections and Conferences, Institutions: Total 3.

Beulah, Benzie County Infirmary, Septic Tank.
 Northville, Detroit House of Correction, Sewage Disposal.
 Northville, Wayne Co. Training School, Sewage Disposal.

Inspections and Conferences, Camps: Total 9.

Chelsea, Sewage Disposal for Camp.
 Comins, Island Lake Camp Sanitation.
 Fenton, Camp Inspection (2).
 Interlochen, Water and Sewers for Interlochen.
 Interlochen, Inspection of National High School Orchestra Camp.
 Little Fish Lake, South Bend Boy Scout Camp, Water Supply and Sewerage.
 Mears, Kum-Agen-Kamp, Inspection.
 Orion, Boy Scout Camp, Inspection (2).
 Torch Lake, Y. M. C. A. Camp, Septic Tank and Water Supply.

Inspections and Conferences, Miscellaneous: Total 12.

Bannister, Drainage.
 Britton, Sewage Treatment for Local School (2).
 Carleton, Nuisance.
 Fordson, Baby Creek, Nuisance.
 Freeland, Sewage Treatment for Public School.
 Jackson, Sewage Treatment for Rural School.
 Merrill, Sewage Nuisance.
 Scottville, Kraft Cheese Co., Nuisance (2).
 St. Johns, Septic Tank.

Roadside Water Survey:

Trunk lines covered collecting samples, 3912 miles.
 Samples collected, 905.

Trunk lines covered posting samples, 1746 miles.
 Municipal water supplies posted, 32.
 School wells tested, 160.
 Gas stations and garage wells, 174.
 Tourist camp wells tested, 50.

PREVALENCE OF DISEASE

	June Report			
	Cases Reported			
	May 1928	June 1928	June 1927	Average
Pneumonia	1,127	453	364	413
Tuberculosis	560	554	532	522
Typhoid Fever	17	22	29	38
Diphtheria	323	332	338	379
Whooping Cough	619	658	586	670
Scarlet Fever	1,176	941	920	991
Measles	4,769	3,712	898	3,991
Smallpox	88	223	152	221
Meningitis	23	28	18	15
Poliomyelitis	4	3	3	3
Syphilis	1,028	1,662	1,378	1,214
Gonorrhea	376	981	717	885
Chancroid	5	7	7	14

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

	June, 1928			Total
	+	—	+—	
Throat Swabs for Diphtheria.....				849
Diagnosis	55	203		
Release	70	141		
Carrier	10	360		
Virulence Tests	3	7		
Throat Swabs for Hemolytic Streptococci				596
Diagnosis	99	127		
Carrier	88	282		
Throat Swabs for Vincent's.....	42	216		258
Syphilis				7783
Kahn	1071	6674	35	
Wassermann		2		
Darkfield		1		
Examination for Gonococci.....	120	1274		1394
B. Tuberculosis				511
Sputum	67	395		
Animal Inoculations	3	46		
Typhoid				97
Feces		33		
Blood Cultures	1	25		
Widal	4	32		
Urine		2		
B. abortus	2	46		48
Dysentery				25
Intestinal Parasites				11
Transudates and Exudates.....				196
Blood Examinations (not classified)				166
Urine Examinations (not classified)				495
Water and Sewage Examinations				1444
Milk Examinations				110
Toxicological Examinations.....				11
Autogenous Vaccines				1
Supplementary Examinations.....				168
Unclassified Examinations.....				492
Total for the month.....				14655
Cumulative Total (fiscal year)				162348
Increase over this month last year				2494
Outfits mailed out				18216
Typhoid Vaccine Distributed, c. c.				1713
Diphtheria Antitoxin Distributed, units				8213000
Toxin Antitoxin Distributed, c. c.				9690
Silver Nitrate Ampules Distributed, boxes				1867
Examinations made by Houghton Laboratory				1325
Examinations made by Grand Rapids Laboratory				6213

THE JOURNAL

OF THE

Michigan State Medical Society

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Contributors are responsible for all statements, conclusions and methods in presenting their subjects. Their views may or may not be in agreement with those of the editor. The aim, however, is to allow authors as great latitude as the general policy of The Journal and the demands on its space may permit. The right to reduce in length or to reject any article is reserved. Articles are accepted for publication on condition that they are contributed solely to this Journal.

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AUGUST, 1928

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

MEDICAL SERVICE

If the cost of medical service has mounted during the past decade—a fact which no one can gainsay—the reason is very apparent. The first contributing cause and main one is the general advance in the cost of living. For those physicians who have been graduated the past ten or fifteen years the professional investment has been greater than that of any other period. This includes not only the monetary outlay but time and effort as well. The pre-medical requirements in the way of education as well as the lengthened medical course make medicine the most expensive of the learned professions. This fact compels many to accept salaried positions with clinics and hospitals, in order to retrieve the money spent on their training rather than suffer the so-called lean years which the older physician endured before he acquired a satisfactory income.

Then there is in some places an over production of doctors which makes them ammenable to the law of supply and demand. It is said that Canada is not able to absorb more than 40% of the graduates of her medical schools. The majority of the 60% find their way to the United States. Statistics are not available regarding the number of graduates from American schools who find satisfactory location. The situation finds an increasing number of doctors with lessened demand particularly as they are geographically distributed.

The work of preventive medicine has been effective in all directions. Typhoid, malaria, smallpox, diphtheria and a number of other infectious diseases are either almost extinct or well under control, compared with conditions that prevailed twenty-five years ago. Therefore medicine must direct its endeavors into a different field if it is to render the maximum service. The medical profession has been largely instrumental in bringing about the lessening of the ravages of infectious diseases, in spite of the contention that they have been indifferent to preventive medicine. The time has come, however, when there must be an adjustment in the work of the private practitioner. There is ample need of periodic examinations and the correction of the imperfections revealed. The experience of those who have examined men between twenty and thirty years of age for the army has demonstrated that nearly 40% of men at this early age were physically unfit for military duty, which means also that they were performing their civic duties with the minimum degree of health. The condition prevails today as nothing materially has happened since 1916 to alter the situation. Periodic health examinations and the treatment of diseased conditions found offers an immediate field for the physician and it is in line with the idea of prevention, which is the spirit of the present day health propaganda.

* * * * *

Michigan is a combination of the industrial and the rural state and represents in a sense the extremes of both with the problems of each. In the large manufacturing centers there are hundreds, sometimes thousands, constantly out of work with the tendency of industry to retire men as they approach the age of fifty. This makes necessary such institutions as the community union, a voluntary charity, and public welfare commissions, for

the purpose of dispensing municipal charity.

Then we have the rural medical problem, namely, the difficulty of providing sparsely settled districts with competent medical service. Again with prevailing medical standards the young physician feels it incumbent to locate where he has prospect of retrieving the greatest financial returns in as brief a time as possible and this means the city or larger town. Hence, there is an evident duty on the part of someone to see that those in the less widely settled parts of the state have access to physicians in case of illness. How is this to be done? The first step in the solution of these problems is their clear comprehension.

In the case of large industrial centers, there seems to be conditions of a social or industrial nature, to remedy which we as a class cannot exert any very great influence. It requires a new kind of statesmanship, industrial rather than political. One thing, however, that can be insisted upon is that charitable service be limited to the really indigent. This will not be easily accomplished. There has been such an impetus to paternalism within the past few years that many have come to look upon the doctor as a sort of public servant whose service should be available for the asking.

THERAPEUTICS

July Harper's magazine contains an interesting as well as timely article by Dr. Joseph Collins the noted neurologist who looks at love, life, literature and a number of other things. Dr. Collins writes this time on group practice in medicine. He is always interesting whether one agrees with him or not. Incidentally, he deals with the subject of therapeutics and scores the medical profession for the lack of emphasis medicine has placed in the past on this which to the patient is the all important matter. We have our share of keen and reliable diagnosticians but in the field of treatment we do not make such a brilliant display. In fact, diagnostic methods have been developed to such a degree that to master them is a feat of mental gymnastics.

But when it comes to the matter of treating patients not so much may be said. Druggists' files reveal prescriptions that are mixtures of incompatible ingredients; one could hardly guess the object the prescriber had in mind. Not long ago a prominent banker declared that he re-

sorted to osteopathy whenever he or any member of his family became ill. His principal reason was what he declared to be his disbelief in drugs. The physician's armamentarium should include not only drugs but any agent, water, heat, light, electricity, massage, diet, anything that will aid in the restoration of the patient to health or alleviate his suffering. Collins goes on to say that, "Aside from immunizers, antitoxins, and parasite killers, a man may practice medicine satisfactorily to himself with two drugs; opium and digitalis; and if he knows how to use properly the physical measures enumerated he can practice satisfactorily to patient and public." The list of drugs might be extended to at least a dozen, which, with a thorough knowledge of their action, would accomplish more than the whole materia medica as usually learned by the student. Then there is what may be termed medical psychology which, if properly understood, would be of untold value. We have heard much of late of constitution clinics and the necessity of treating the "mind body," for as Collins says, "It is not only the malign microbe the physician has to combat; it is the unclean spirit."

THE A. M. A.

The seventy-ninth annual session of the A. M. A. is a matter of history. Those who attended were well repaid for the time taken. There were 138 registered from Michigan, one hundred and thirty-eight out of approximately 4,000 doctors in the state. As is to be expected, the attendance at the great national conventions varies with the location. When held in the large centers of population the attendance is the largest. The registration from Minnesota was 1,466, a number that could be well matched by the membership of the Wayne County Medical Society, were the convention held in this state. The total registration was a little under 5,000 out of the A. M. A. membership of 97,000.

A feature that must have impressed favorably every visitor was the scientific exhibit. It was not only instructive but very complete. In a graphic way it indicated the great progress being made in American medical science.

Minneapolis proved an ideal location for the convention. The new auditorium housed the major activities, including the scientific and commercial exhibits, and meetings which could not be accommodated there were held in nearby hotels easily accessible.

An invitation was extended by the Wayne County Medical Society to hold the eightieth annual convention in Detroit but this was late in being presented. It appears that all invitations should have reached the Secretary of the Association at least sixty days before the convention. Portland, Oregon, was chosen as the place of the 1929 meeting.

Dr. F. C. Warnshuis of Grand Rapids was re-elected Speaker of the House of Delegates for the seventh year.

Dr. M. L. Harris of Chicago is the new President-elect.

THE PASSING OF THE TEACHER

"What the student takes from the lecture of a good clinical teacher is by no means limited to a mass of facts that might be acquired quite as well from his books; the student is introduced into the mind of his teacher, he sees how the latter approaches his problem and is himself moulded by the example of his teacher. It is unthinkable to fail to recognize that the personalities of clinical teachers as Billroth, Trousseau, Charcot, Osler, Frerichs, Gerhardt have been without influence on young physicians."—Professor Freidrich Muller of Munich.

This is refreshing in an age when everything is turned to research, and true pedagogy is being more or less disparaged. While the importance of research is not likely to be overemphasized, the importance of teaching should be held in equally high esteem. The teacher is the interpreter, often the evaluator, of the findings of the research laboratory; and if he is blessed with a pleasing personality and an enthusiasm that is contagious, his influence on his generation is beyond question. How many recall such persons not only in medicine but in their earlier academic days whose influence on their lives has been priceless?

EDITORIAL NOTES

A prominent oto-laryngologist writes this Journal enclosing the selection which appears on the cover, with the remark that it, "might not be inappropriate to your front page, where already you have found room for good things." Thanks are accorded the contributor for the stimulating intimation contained in the quotation.

The Women's Auxiliary of the Wayne

County Medical Society extends to all doctors' wives who are contemplating visiting Detroit during the convention of the State Society in September, a cordial invitation to be its guests during that time. Arrangements are being made for sight seeing and shopping tours, and there will be various forms of entertainment provided for all the ladies.

Much credit is due the Michigan state police and also the newspapers for the war on quacks. The work of the police is much more effective when accompanied by unwholesome publicity. Quackery always thrives when allowed to make its blatant claims unchallenged. We would suggest that property owners renting property to be used for fraudulent or criminal purposes be penalized by having it "padlocked" for a year or more according to the gravity of the offense. The quack and other malefactors cannot carry on their nefarious business without some place to shelter it.

The Extension Division of the University of Michigan has announced an office in Detroit at the Cass Technical High School. The object is to get in closer touch with numerous groups of Detroiters who are interested in adult education. For a number of years past the Extension Department of the State University has conducted credit courses in Detroit. The growing demand for this kind of work has prompted the steps taken in the way of establishing a local office in the city. General information about the university or special information regarding Extension work, may be had by applying to Mr. C. A. Fischer, Assistant Director, Cass Technical High School, Detroit, Mich. The Extension Division, under the able directorship of Dr. W. D. Henderson, has rendered invaluable service to the work undertaken by the medical profession of the state, and Joint Committee on Public Health Education.

"Whilst the successful, nay, the competent practice of medicine—an art which includes that of surgery—may be and often is compatible with ignorance of the history of medicine, he is the best physician in the classical and fullest sense of the word who unites a mastery of his art to an intimate acquaintance with the great historical doctrines upon which they are based," says the medical historian, Crookshank. With the object of devoting more attention

to the historical aspects of medicine, this Journal will publish from time to time papers dealing with the history of medical and surgical specialties. All knowledge is historical inasmuch as it is a record of observed facts of human experience and writing and of human thought. Even the medical or surgical papers based on the experiences and researches of today are the bricks of which the historical superstructure is made. The Journal is indebted to Dr. John L. Chester of Detroit, Mich., for the interesting account of Cardiology which appears in this number of the Journal of the M. S. M. S.

QUACKS AND THEIR VICTIMS

(From the Detroit Free Press)

The people of Detroit must wish every success to the crusade which the state authorities are carrying on against fake healers.

This community has been sorely afflicted by every brand of medical quackery, preying on the ignorance and the purses of precisely those men and women who could least afford to be victimized. Evidence gathered from time to time by local medical societies indicated the extent of the peril. During the few weeks of their present campaign the state police have put several of the charlatans out of business, while many more are marked out for similar treatment.

It may be as well that the raiders have centered their attention on the metropolis. Possibly here and there in the smaller towns of Michigan the medical quack survives, but in such places he is not likely to remain long undiscovered. In teeming, growing Detroit, despite the watchfulness of the medical profession, whose duty it is to warn the public against frauds posing as medical men, he often operates unmolested for years.

Since it may be doubted whether the time will soon arrive when popular enlightenment will have rendered medical quackery utterly unprofitable, the only hope seems to lie in vigilant, energetic enforcement of our anti-quack statutes. The state police authorities are to be commended for the prompt way in which they have already separated some of the imposters in Detroit from their prey.

ODE TO A SKELETON

Behold this ruin, 'tis a skull
Once of ethereal spirit full
This narrow cell was life's retreat;
This space was thought's mysterious seat.
What beautiful visions filled this spot?
What dreams of pleasure, long forgot?
Nor hope, nor joy, nor love, nor fear
Hath left one trace of record here.
Beneath this mouldering canopy,
Once shone the bright and busy eye,
But start not at the dismal void,
If social love that eye employed.
If not through evil fires it gleamed,
But through the dews of kindness beamed,
That eye shall shine forever bright
When stars and sun are sunk in night.
Within this hollow cavern hung
The ready swift and tuneful tongue,
If falsehood's honey it disdained,
And when it could not praise was chained;

If loud in virtue's cause it spoke,
Yet gentle concord never broke,
That silent tongue shall plead for thee
When time unfolds eternity.
Say, did these fingers delve in the mine,
Or with the envied ruby shine?
To hew the rock, to wear the gem,
Avails but little now to them.
But, if the page of truth they sought,
Or comfort to some mourner brought,
These hands a greater need shall claim
Than all that wait on wealth and fame.
Avails it whether bare or shod
These feet the paths of duty trod?
If from the bowers of ease they fled,
To seek affliction's humble shed;
If grandeur's guilty bride they spurned
And home to virtue's cot returned,
These feet, with angel's wings shall vie,
And tread the palace of the sky.
—From the Iowa State Medical Journal.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Dr. Leo Dretzka of Detroit, left July 2nd for London, England, where he will attend the International Cancer Conference. From there he will go to Russia, where he will visit the Clinics at Moscow and Leningrad.

Dr. James E. Davis, Professor of Pathology in the Detroit College of Medicine is taking a two months vacation at Traunmuhle Bad Aussee Styria, Austria.

Dr. John A. Wessinger has been re-appointed health officer at Ann Arbor, with an increase of salary of \$1,000.00 per annum. Dr. Wessinger has served the city, in this capacity, for twenty-two years.

DEATHS

DR. FLEMING CARROW

Dr. Fleming Carrow died suddenly at his summer home at Traverse City, June 23rd. Dr. Carrow was born at Still Pond, Md., in 1855. He graduated from George Washington University in 1870 with the degree of A. B. Four years later he received his M. D. degree. In 1903 he was given the honorary degree of M. A. at the University of Michigan. During the years 1874 to 1885 he was a surgeon in the service of the Chinese government and in 1887 he became professor of ophthalmology at the University of Michigan. Following his retirement from the faculty in 1904 he practised his specialty in Detroit. He was a member of the Michigan State Board of registration in medicine, the American medical Association, Anthropology Society of Paris, The American Association for the Advancement of Science, the Royal Society of Portugal and the Detroit club. He is survived by one son, Herbert P. Carrow of Detroit.

MEDICO-SOCIAL AND ECONOMIC

"The old order changeth," quotes Dr. George E. Vincent. To this changing order all, even doctors must adapt themselves and this adaptation, he goes on say, takes place not in elaborate schemes of reform but by piecemeal, by trial and error. To say we are living in an age of transition is to utter a truism. Change, however, is one of the characteristics of life; so heaven help us when the time comes when we have attained a stable equilibrium. But sometimes the rate of progression is faster than at others. Today there is a manifest feeling of dissatisfaction not only among the people at large but in the medical profession as well. On the one hand is the high cost of health, especially of regaining it when once it is impaired; on the other, the physician feels he is not adequately remunerated for the time, cost, and effort he has put into his medical training and what he considers is his legitimate field is being encroached upon by various institutions and agencies which are meeting him in unfair competition.

Among the influences at work during recent years is the presence of a large number of persons more or less scientifically trained who are engaged in public health work and whose object is the prevention and treatment of disease in the most socially effective way. The time honored relationship between physician and patient means nothing to them.

County and state medical societies were the first to recognize the necessity of sanitation and preventive measure in regard to health. The early activities were limited to the control of water supplies and the suppression of epidemics. Later, departments of vital statistics were added. Many, perhaps the majority of physicians, still feel that the proper function of public health organizations is the organization of preventive agencies and not the diagnosis and treatment of disease.

CHARGES BELOW COST

According to H. H. Moore,* official laboratories have been able to make diagnostic examinations at a cost much below that charged by commercial laboratories and by commercial laboratories is meant not those operated by laymen but those run by qualified physicians. As an example of some of the fees charged we have Wasserman, San Francisco board of health, 50c. Boston Dispensary, X-ray of entire mouth, \$2.50 to \$4.50; complete gastrointestinal examination, Boston Dispensary, \$5.00 to \$7.00. This does not include overhead. The doctor whose practice is affected helps pay the overhead. The average cost of examinations by state health departments is said to be approximately \$1.00 per examination. It is said that in Pittsburgh the majority of tonsillectomies are charity cases. To what extent this form of charity prevails in other American cities

is not known. At a medical meeting recently attended by the writer, one of the younger members made the remark, "I wonder if any of you realize that when you send specimens of blood or urine to board of health laboratories, you are aiding 'state medicine'?" One very efficient clinical laboratory in this city had to close its doors simply because many of the doctors took advantage of the opportunity to get this work done for an insignificant charge."

The reader's attention is called to an article by Dr. Guy L. Keifer on the Economic Side of Immunization or Treatment in this number of the Journal M. S. M. S. in which he shows how the matter of immunization in this state may be accomplished to the economic advantage of the physician as well as great personal advantage to the public.

DUTY OF A. M. A.

The American College of Surgeons deserves credit for their initiative and for what they have accomplished in raising the standards of hospitals. This is a matter, however, which should be undertaken and carried on by the American Medical Association. Why? Because the A. M. A. represents the entire profession and not any particular specialty within the profession. The hospital is the doctor's workshop. It should be controlled, therefore, by the profession as a whole and this can be done best by organized medicine as represented by its national association. There are hospitals, and this does not refer to teaching hospitals, which engage in unfair competition with the profession, particularly in laboratory diagnostic work. In a city in this state a hospital undertook to make clinical laboratory examinations at such a ridiculously low rate, for ambulant patients, that a physician who had limited his work to that department of medicine had to give it up and go into general practice.

Not only is an occasional hospital making inroads into the practice of medicine, but also many industrial concerns are as well. Every doctor living in the large industrial cities in this state meets this competition in some form or other. One large industrial concern in Michigan is reported as offering to do X-ray work for its employees and their families and friends to the extent of making radiographs which are given the patient at a price that scarcely covers more than the cost of the materials used. These are taken by the patient to his doctor who may or may not be familiar with the reading of X-ray films and in the end a local roentgenologist is called to interpret them. He is at a disadvantage not only in the loss of his fee, but in being asked to read plates the technique in the making of which he had no hand.

THE ELIMINATION PROASS

The result of it all is first the elimination of the specialist in laboratory methods, the roentgenologist, the internist; even the surgeon is not safe. Time was when the individuality and personality of the surgeon counted for everything with the patient. Several large hospitals and clinics have done a lot towards discounting the

* American Medicine and the People's Health, by H. H. Moore, Public Health Economist; United Public Health Service. This book contains an immense amount of data on a subject that is of vital interest to every reader of this Journal. It might also be mentioned that Mr. Moore will assist the Committee on the Cost of Medical Care which is mentioned in the paper. The work bears the imprint of D. Appleton & Company, New York.

personal element in surgery. In other words, the surgeon is becoming depersonalized. Patients applying to these institutions for surgical care accept the surgeon assigned to them.

As a profession we are individuals and have shown little inclination to group action. Our meetings and conventions have as their objective the advancement of our science and art rather than self preservation. Dr. Joseph Collins in a recent number of *Harpers* has put forth a strong plea for group medicine. This is only possible where the individuals composing the groups enter it on some basis of remuneration each in proportion to his contribution in training, prestige and experience, regardless of specialty.

Maybe we are helpless as the erstwhile independent grocer with the arrival of the so-called "chain" store which operates under the "cash and carry" system.

"COST OF MEDICAL CARE"

The whole subject of the cost of medical care is to be investigated by a special committee made up of representatives of the American Medical Association, the Metropolitan Life Insurance Company and the United States Public Health Service. The period of investigation will include the next five years. It is the expressed hope of the committee that their labors will throw substantial light upon: "The extent to which the incidence of sickness falls upon various economic and social classes in different types of communities, and the variation in cost to the individual families; the proportion of the cost of medical care in typical communities borne by the patient, the community, and the physician himself; the financial returns to physicians with various types of practice in particular areas and under particular conditions; and the comparative adequacy and economy of medical care under diverse plans and programs of emergency or distributed payment."

Dr. Olin West, Secretary of the American Medical Association, is said to have declared the one great outstanding problem before the medical profession today to be that involved in the delivery of adequate scientific service to all the people, rich and poor, at a cost which can reasonably be met by them in their respective stations in life.

Then there is the other side to the question which is expressed by Dr. Ray Lyman Wilbur, President of Stanford University and former President of the American Medical Association, "Physicians as a group are not earning adequate incomes; and for many, hospitals and other facilities for scientific work are lacking." With the cost of medical education, with the amount of free service or services not paid for, the problem is a vexed one for the physician and his family. Physicians have from time immemorial contributed of their time and efforts without charge towards preventive work. In addition to what the physician has contributed directly towards the matter of diagnosis and treatment, to his credit goes the large effort towards the elimination of preventable diseases.

Dr. Sinai has been assigned to the investigation of conditions in Michigan. The writer knows of no happier choice. Dr. Sinai is well known in the state as an associate of Dr. W. D. Henderson of the University of Michigan Extension Department. Having immediate charge for a number of years of the program of Public education in medicine which has been carried on by the Joint

Committee on Health Education, Dr. Sinai has the medical viewpoint from several years of contact with the profession pretty much over the state. This, together with his special training, affords him an impartial approach to the subject of "Cost of Medical Care."

J. H. DEMPSTER.

PROLONGATION OF LIFE

Instead of using alchemy, or the numerous supposed "elixirs of life" in order to retain youth, the late Dr. A. C. Eycleshymer, of the University of Illinois Medical School, points out in a manuscript left in incomplete form by his death that the quest for youth is not less popular today than it has been for countless ages, but the search today is becoming more and more scientific, and so is coming nearer to success than any of the older processes.

This article was prepared for publication in the *Scientific Monthly* by Dr. Eycleshymer's friend, Dr. E. P. Lyon.

The idea of an elixir of life dates back to Biblical times, when the "tree of life" is introduced in the Garden of Eden. Adam was sent from the Garden "lest he put forth his hand and take also of the tree of life, and eat, and live forever." This idea that there must be somewhere a tree which was intended to preserve man from disease and death prevailed for ages.

Today, through the avenues of empirical medicine and sanitary science, the expectancy of life has been greatly increased. The average span of life was increased about four years during the seventeenth and eighteenth centuries, about eight years in the first three-quarters of the nineteenth century, and about sixteen years since 1875.

"While we have thus made much progress," Dr. Eycleshymer states, "we still lack information in easily accessible fields". While there is always interest shown in plants and animals, "the study of man, with a view of preserving and accentuating, in the offspring, the sterling qualities found among the ancestors, has not received serious consideration. Yet we know that heredity is one of the chief factors in longevity."—Science Service.

SICK PERSONALITIES NEED DOCTORS' ATTENTION

A patient's emotions are as much a part of him as his heart or stomach, and doctors should take this inner life of the patient into careful consideration, Dr. Lloyd H. Ziegler, of the Mayo Clinic at Rochester, declared, speaking before the American Psychiatric Association. "Many of the milder types of emotional disorders are seen by general practitioners of medicine who diagnose them as nervous dyspepsia, gastric neuroses, and similar maladies," Dr. Ziegler said. "If such diagnoses cause physicians to confine their treatment to individual organs, rather than to sick personalities, patients may continue to search for relief from the emotional distress, and may go far and wide out of the medical profession." Dr. Ziegler reported cases in which emotional distress was associated with maladies of the heart, lungs, stomach and other organs. Anxiety and depression doubtless may bring about changes in the chemistry of the body causing physical disorders or else lowering the patient's resistance to infectious disease he stated—Science Service.

OUR OPEN FORUM

Affording Opportunity for Personal Expression

Editor Journal Michigan State Medical Society—Being one of the informants as mentioned in the reply of the Council to the editorial of the Illinois State Medical Journal of May, I cannot help taking exception to at least one of the remarks in that letter namely that the information in that letter was misinformation. If there were any untruths in those communications we will be glad to have them pointed out and make suitable amends, but we do not like the inference that the statements were not based on facts. We would recommend that instead of getting just briefs of the statutes, you publish them in full and let everyone judge for himself. So far as the editor of the Illinois Journal was concerned, he was furnished with a complete copy of the Michigan statute for 1927.

Now, in regard to the crippled children's act. It has been my good fortune or possible misfortune to bump into the actual workings of the law. I trust you will accord space in your Journal, that all may know just what happens. A certain family were patients of mine about three years ago, at which time the mother and son were both in the hospital for two weeks, at which time they occupied semi-private rooms for which they paid cash. They paid me \$150.00 for professional services. Last October I did a minor operation for the same family for which I was paid \$50.00. Three weeks ago a son was brought to me complaining of pain in the right leg. Examination showed very little outside of slight atrophy. X-ray consultation was advised. In the meantime it was noised about that the bone specialist from Ann Arbor was to hold a clinic at Mount Clemens and they were advised to take the boy there. This was done. X-rays were taken and a diagnosis made of a joint condition. Without further inquiry, they were advised to take the boy immediately to Ann Arbor. Since that time the nurse on the job has called repeatedly at the home urging them to go at once and made the statement that these doctors were undoubtedly the best in the state and that the boy would be very likely be crippled for life if not treated at once and that if the operation was done here locally it would cost no less than \$1,000.00. The family has returned to me. They are very much alarmed about the boy's condition. They do not care to take him to Ann Arbor to be left six or seven months as informed was necessary, if he can be treated at home and still they realize they cannot afford to pay \$1,000.00 for treatment but are very willing to pay a reasonable fee and are not by any manner or means asking for charity.

This then, although a single incident, affords I believe a wonderful example of the actual operation of the crippled children's act. This is one of the bills that our Councillors, officers and hired attorneys approved as a wonderful addition to our statutes and could in no way "be construed as State Medicine Measures."

If this is not State Medicine or its equivalent, call it what you want, then what in the name of common sense is it?

How would an ethics committee regard a private practitioner, or for that matter, any hos-

pital, outside the U. of M. who would announce with a blare of trumpets, newspaper publicity, statements of nurses either direct or by implication that he was the best in the state at fees far below those of his colleagues? Please answer that. If the brand of ethics that you and I must submit to is not good enough or does not apply to our University colleagues, there must be something wrong.

If these measures are not measures of State Medicine, let's have an explanation of what they are. Not a simple denial. Let those who approve them explain through the forum of the Journal their sterling qualities and the benefits that will accrue to the medical profession.

If this was not "Politic" to confine in the rank and file at that time surely no damage can be done now.

If this is what our officers and representatives had in mind when they approved these bills, if they knowingly and complacently fostered them and can give no satisfactory explanation for their actions, these statutes are the most glaring indictment of betrayal of the trust vested in them and a monument to an administration of which they may never be proud.

The days of "honorary" offices in a medical society are passed, and the day when a man holds his office on merit alone is here. Let the electorate scrutinize with care the accomplishments and associations of our future candidates, and let the candidate from the platform declare himself on the important issues, or the prediction of Dr. Albert E. Bulson, Editor of the Indiana State Medical Journal will surely come true.

Dr. Bulson says "Unless the medical profession awakes to the dangers that threaten it will not be ten years before a majority of the medical men of this country will be occupying little better than clerical positions with clerical incomes and scientific medicine for the masses will have greatly deteriorated as a result of the loss of independent, incentive and self respect of the individual physician.

—E. C. Baumgarten, M. D.

A WARNING

Secretary Michigan State Medical Society.

It is necessary to advise the physicians of this part of the state regarding a woman who is undoubtedly a morphine addict. Her story is that she is suffering from a kidney calculus, and that being away from her regular doctor must have relief. She claims Greenville as home, she is about 5 feet 4 inches, weighs about 150 to 160 pounds, is somewhat on blonde order. Upon interrogation she has been to about all the physicians in Greenville, also to Butler at G. R. Clinic, and I also infer that she doubtless has been under addict treatment at Ann Arbor.

Needless to remark that she should be put under restraint.

Jay Odell Nelson, M. D.

July 5, 1928.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EDITOR: Frederick C. Warnshuis, M. D.

Secretary Michigan State Medical Society

Official Program—108th Annual Meeting, Michigan State Medical Society, Detroit, Michigan

September 26-27-28th, 1928

OFFICIAL CALL

The Michigan State Medical Society will convene in Annual Session, in Detroit on September 26, 27, 28, 1928. The provisions of our Constitution and By-Laws and the official program will govern the business and transactions of this annual session.

Herbert E. Randall, President.
R. C. Stone, Chairman of the Council.

Henry R. Carstens, Speaker.

Attest: F. C. Warnshuis, Secretary.

DAILY SCHEDULE

Headquarters: Book-Cadillac Hotel.

September 25th

8:00 P. M.—Council Meeting.

September 26th

10:30 A. M.—House of Delegates.

2:00 P. M.—House of Delegates.

7:30 P. M.—House of Delegates.

September 27th

9:00 A. M.—Section Meetings.

1:30 P. M.—Section Meetings.

7:45 P. M.—First General Session.

September 28th

9:00 A. M.—Section Meetings.

11:45 A. M.—Second General Session.

1:30 P. M.—Section Meetings.

8:00 P. M.—Public Meeting Orchestra Hall.

HOSPITAL CLINICS

The several hospitals of Detroit will present a series of medical and surgical clinics on September 24th and 25th. Details will be announced in the September issue and will be posted at the hotels.

EXHIBITS

A splendid Scientific and Commercial Exhibit will be conducted on the mezzanine floor of the Book-Cadillac Hotel.

MEETING PLACES

All the Sessions, General Meetings, Registration and Exhibits will be located on the Mezzanine Floor of the *Book-Cadillac Hotel*. The Registration Booth will be opened at 10:00 a. m., September 26th.

ENTERTAINMENT

Entertainment Features will be imparted in the September Journal.

FIRST GENERAL SESSION

Time: Thursday Evening, September 27th, 7:45 P. M.

Place: Main Ball Room.

8:00 P. M.

1. Call to Order, President H. E. Randall, Flint.
2. Invocation.
3. Welcome, President Wayne County Society.
4. Announcements, Secretary.
5. President's Annual Address, H. E. Randall, Flint.
6. Address.
7. Nominations for President.
8. General Business.

SECOND GENERAL SESSION

Time: Friday, September 28th, 11:45 P. M.

Place: Main Ball Room.

1. Call to Order.
2. Report of Nominating Committee.
3. Introduction of President Elect.
4. General Business.
5. Adjournment.

SCIENTIFIC SECTIONS

PEDIATRICS

Chairman, R. M. Kempton, Saginaw.
Secretary, Wm. S. O'Donnell, Detroit.

THURSDAY MORNING SESSION

September 27th

1. Thyrotoxicosis in Children—Dr. Hugo A Freund, Detroit.

A brief description of the histology of the

normal thyroid at birth, in early childhood and during adolescence will be given. Illustrations of the earliest changes occurring in beginning colloid goiter in childhood will be shown. The histopathology of thyroids in children suffering from thyrotoxicosis will be demonstrated. Case histories and reviews of thyrotoxicosis together with metabolism studies and treatment will be presented.

2. The Treatment of Erysipelas with Erysipelas Streptococcus Antitoxin—Dr. John E. Gordon and Dr. D. C. Young, Detroit.

The severer cases of 256 erysipelas infections observed during 1927 were treated with the recently developed erysipelas streptococcus antitoxin. The serum exerts a favorable influence on the duration of the fever, toxemia and the period of incapacitation. The complications are not appreciably influenced.

3. The Etiology of Measles and Its Specific Treatment—Dr. N. S. Ferry, Detroit.

A review of the experiments carried out with the Streptococcus Morbilli isolated by Ferry and Fisher from the blood in early cases will be presented together with the experimental tests with measles toxin prepared from this organism and the recent clinical work with measles antitoxin obtained from horses immunized with measles toxin.

4. The Diagnosis and Treatment of Pyloric Stenosis—Dr. Grover C. Penberthy, Detroit.

This will include the analysis of a series of cases studied and operated upon at the Children's Hospital, a discussion of the differential diagnosis, medical management before and after operation, the operative procedure and the report of the final results in cases followed after leaving the hospital.

THURSDAY AFTERNOON SESSION

1. The Desirability of Seeing the Young Child as a Unit in Relation to Medical Diagnosis.

This paper is given through the cooperation of the Staff of the Merrill-Palmer School, Detroit: Dr. E. Lee Vincent, Dr. Rachel Stutsman, Dr. C. A. Wilson, Miss Winifred Rand, Miss Mary Sweeney, Miss Winifred Harley and Dr. Icie G. Macy. There will be a discussion and demonstration of the correlation of the mental, nutritional and educational findings regarding young normal children with the influence of the family relations and the significance and the interpretation of these in their relation to medical findings. This will also include the contributions of the biological chemistry laboratory to such case studies.

FRIDAY MORNING SESSION

1. The Role of Blood Transfusions in the Treatment of the Diseases of Children—Dr. Marsh W. Poole, Windsor, Ont.

Blood transfusion has become such a popular form of therapy in so many conditions

encountered in infancy and childhood that its value is sometimes questioned. In this paper an attempt has been made to analyze the experience gained at the Children's Hospital, Detroit through a large series of transfusions.

2. The Study of the Active Immunization Against Scarlet Fever—Dr. Bernard B. Bernbaum, Detroit.

This study is a comparison of the active immunity against Scarlet Fever as shown by the Dick test produced by Larson's toxin and Dick's toxin. A group of children were Dick tested and the positive reactions were divided into two groups. One group was immunized with Larson's toxin and the second group was immunized with Dick's toxin. These two groups have been tested for immunity against scarlet fever for two years.

3. The Practical Methods of the Production of Active Immunity in Infectious Diseases—Dr. Roy W. Pryer, Lansing.

This paper considers primarily diphtheria toxin immunity as produced by diphtheria toxin-antitoxin mixture, diphtheria toxoid and purified diphtheria toxoid and ricinoleated diphtheria toxin, together with a brief review of the literature and a summary of the advantages and disadvantages of each method with the possibility of applying some of these methods to other tests as for instance in scarlet fever.

4. The X-Ray examination for Pulmonary Tuberculosis in Children—Dr. C. C. Birkelo, Detroit.

In the X-ray examination the tracheo-bronchial nodes are readily recognized and need not be guessed at when producing symptoms. A tuberculous parenchymal infiltration has definite characteristics at all ages and the X-ray examination of the chest is just as valuable in the child as in the adult as regards the recognition of early tuberculosis.

FRIDAY AFTERNOON SESSION

1. Encephalitis in Children—Dr. Thomas B. Cooley, Detroit.

This paper will discuss the increasing frequency of encephalitis in recent years, both the toxic and the infectious types. The difference of symptomatology in early life—epidemic and hemorrhagic encephalitis—encephalitic symptoms accompanying or following certain infections: pyelitis, measles, pertussis and influenza—lead encephalitis—the difficulties of differential diagnosis—the gravity of the sequelae, paralyses, mental retardation or imbecility, character changes and epileptiform states—the prognosis and treatment.

2. Mongolian Idiocy—Dr. Thomas D. Gordon, Grand Rapids.

The comparison of the theories of etiology—"Exhaustion Products"—endocrine theory—Crookshank's anthropological or reversion theory. The most characteristic physical signs and mental traits in recent cases seen in practice. The difficulties encountered in

securing admission to suitable schools. The advantages of commitment to an institution. The factors influencing prognosis as to life and as to future mental development.

3. Allergic Diseases in Children—Dr. Samuel J. Levin, Detroit.

The most frequent conditions found are eczema, asthma urticaria and hay fever. The importance of the more obscure conditions such as vague abdominal pains epilepsy and headache in relation to allergy are stressed. By means of the skin tests the diagnosis of the etiological factors can often be shown and specific treatment frequently instituted. In those cases in which the etiological factor cannot be shown, non-specific foreign protein therapy has been of value.

4. Title to be announced—Dr. John P. Parsons, Ann Arbor.

5. Serum Reactions: The Sensitizing Effect of Previous Antitoxin and Toxin-antitoxin Administration — Dr. John E. Gordon.

Persons who previously have received toxin antitoxin mixtures react more frequently to serum injections in the treatment of diphtheria, scarlet fever and erysipelas than do control persons. The sensitizing effect of previous serum injections is definite but less marked than toxin antitoxin. The severity of serum reactions is largely governed by the degree of sensitization.

MEDICINE

Chairman, A. Jennings, Detroit.

Secretary, W. R. Vis, Grand Rapids.

Dr. Carl D. Camp, Professor of Neurology, University of Michigan—"Disturbance of Function Related to Emotional Conflicts."

Dr. George L. Waldbott, Detroit—"The Present Status of the Treatment of Asthma."

Dr. John L. Chester, Detroit, "Electro-cardiograms and their Clinical Significance."

Dr. Fred P. Currier, and Dr. Wm. R. Torgerson—"The Present Status of Gall-Bladder Diagnosis and Surgery."

Dr. L. H. Newburgh, Professor of Medicine, University of Michigan—"Obesity."

Dr. Cecil Corley, Jackson, "Multiple Neuritis due to Chronic Focal Infection."

Dr. C. C. Sturgis, Professor of Medicine, University of Michigan—Subject to be announced later.

Dr. E. N. Nesbitt, Grand Rapids—"Healing Tuberculosis."

Dr. C. L. Hess, Bay City—"On the Use of U-50 and U-100 Insulin in Diabetes."

Dr. A. F. Jennings, Detroit—"Medical Experiences in Hyperthyroidism."

Dr. V. M. Moore, Grand Rapids, "The X-ray in the Diagnosis of Tuberculosis."

Dr. C. J. Marinus, Detroit—"Endocrines."

Dr. A. B. Olsen, Battle Creek Sanitarium—"The Medical Treatment of Surgical Tuberculosis by Heliotherapy."

Dr. Henry J. John, Cleveland Clinic—Subject to be announced later.

Dr. George F. Suker, Professor of Ophthalmology, Chicago—Subject to be announced later.

Dr. Richard M. McKean and Dr. George E. McKean, Detroit—Subject to be announced later.

Dr. C. C. Sturgis, Professor of Medicine, University of Michigan—Subject to be announced later.

Dr. Carl Hedbloom, Professor of Surgery, Illinois Medical College—"Thoracoplasty."

We are unable to state at this time when these papers will be given on our program during the two-day meeting.

Yours sincerely,

WILLIAM R. VIS, M. D.

SURGERY

Chairman, Fred. A. Collier, Ann Arbor.

Secretary, F. J. O'Donnell, Alpena.

September 27th—A. M.

SYMPOSIUM ON THORACIC SURGERY

Dr. Edward O'Brien, Detroit—"Surgical Treatment of Pulmonary Tuberculosis."

Dr. F. Dolley, Los Angeles—"Surgical Treatment of Pulmonary Cavitation."

Dr. Wyman Whittemore, Boston—"Chronic Pulmonary Suppuration."

Dr. Carl A. Hedblom, Chicago—Subject to be announced.

Discussed by Dr. Pritchard, Battle Creek; Dr. John Alexander, Ann Arbor; Dr. A. W. Hudson, Detroit.

September 27th—P. M.

Dr. George Crile, Cleveland—Subject to be announced. Discussed by Dr. C. D. Brooks.

Dr. Arthur W. Allen, Boston—"Treatment of Vascular Lesions of the Extremities."

Dr. E. C. Davidson, Detroit—"Treatment of Burns."

Dr. A. S. Crawford, Detroit—"Diagnosis of Brain Tumors." Discussed by Dr. Cassidy, Detroit.

September 28th—A. M.

SYMPOSIUM ON TREATMENT OF FRACTURES

Dr. Arche Hall, Detroit—"Fractures of the Ankle."

Dr. John Hodgen, Grand Rapids—"Treatment of Common Dislocations."

Dr. Grover C. Pemberthy, Detroit—"Fractures of the Femur."

Dr. Philip D. Wilson, Boston—"Modern Concepts of the Treatment of Fractures."

Discussion by Dr. Manwaring, Flint; Dr. Kidner, Detroit; Dr. Ricker, Cadillac; Dr. Whittaker, Detroit.

September 28th—P. M.

Dr. F. N. G. Starr, Toronto—Subject to be announced.

Dr. R. E. Cumming, Detroit—Subject to be announced.

Dr. Carl Ebernach, Milwaukee—"Treatment of Pyelitis."

Dr. Edward Cathcart, Cleveland—"The Place of Pyelography in Diagnosis."

OPHTHALMOLOGY AND OTO-LARYNGOLOGY

Chairman, J. S. Wendel, Detroit.
Secretary, A. R. McKinney, Saginaw.

Thursday, September 27th

9:00-11:30 A. M.—Chairman's Address.

Two papers on Oto-Laryngological subjects by section members.

One paper by invited guest.

12:00 M.—Luncheon with round table discussion following.

2:30- 5:00 P. M.—Clinics at Harper Hospital—
Demonstration of cases and operations by the eye, ear, nose and throat Staff—in charge of Dr. G. E. Frothingham.

Friday, September 28th

9:00-11:30 A. M.—Election of Officers.

Two papers on Ophthalmological subjects by section members.

One paper by invited guest on Ophthalmology.

12:00 M.—Luncheon and round table discussions in charge of invited guest.

2:30- 5:00 P. M.—Clinics at Receiving Hospital in charge of Dr. J. Milton Robb.

All members of the section are invited to attend the round table luncheons and to present written questions or subjects for discussion.

GYNECOLOGY AND OBSTETRICS

Chairman, G. Van Amber Brown, Detroit.
Secretary, Harold Henderson, Detroit.

September 25-26th

1. "Shall We Operate on Acute Pus Tubes,"
Dr. Max Brunell, Flint, Mich.
2. "Cancer Problems,"
Dr. Reuben Peterson, Ann Arbor.
3. "Treatment of Placenta Praevia,"
Dr. Jas. M. Pierce, Ann Arbor.
4. "The Use of Lipoidol in Gynecological
Diagnosis," Dr. H. C. Gushman, Detroit, Mich.
5. Subject to be announced,
Dr. H. E. Northrop, Highland Park, Mich.
6. "Saving of the Uterine Adnexa via
Pyosalpinx," Dr. Robert P. Morris, New York.
7. Gynecological clinic, Harper Hospital,
Dr. George Kamperman.
8. Obstetrical Clinic, Harper Hospital,
Dr. Ward Seeley.
9. Subject to be announced.
Dr. Wm. P. Tew, University of Western
Ontario, London.

HOUSE OF DELEGATES

Crystal Ball Room

Wednesday, September 26th

FIRST SESSION

10:30 A. M.

Speaker, Henry R. Carstens, Detroit.
Vice-Speaker, H. J. Pyle, Grand Rapids.
Secretary, F. C. Warnshuis, Grand Rapids.

ORDER OF BUSINESS

1. Call to Order.
2. Report of Credentials Committee.
3. Speaker's Address—H. R. Carstens.
4. President's Address—H. E. Randall.
5. Annual Report of the Council—R. C. Stone.
6. Appointment of Reference Committees.
7. Election of Nominating Committee.

NOTE: No two members shall be from the same Councilor Districts.

Duty of Nominating Committee:

(a) Supervise Ballot for President.

(b) Nominate:

1. Four Vice Presidents.
2. Delegates to A. M. A. and their Alternates to succeed:
C. S. Gorsline.
J. D. Brook.
L. J. Hirschman.
3. Designate place of next Annual Meeting.
8. Reports of Committees:
Medical Education.
Hospital Survey.
Public Health.
Legislation.
Tuberculosis.
Venereal Prophylaxis.
Civic and Industrial Relations.
Nursing Education.
Medical History.
Legislative Commission.
Delegates to the A. M. A.
9. New Business and Resolutions.
10. Recess.

SECOND SESSION

2:30 P. M.

1. Roll Call.
2. Reports of Reference Committee.
3. Unfinished Business.
4. New Business.
5. Recess.

THIRD SESSION

7:30 P. M.

1. Roll Call.
2. Reports of Reference Committee.
3. Report of Nominating Committee.
4. Elections:
(a) Four Vice Presidents.
(b) Place of Annual Meeting.
(c) Councilors to succeed G. L. LeFevre and Richard Burke.
(d) Speaker.
(e) Vice-Speaker.
(f) Delegates and Alternates to A. M. A.
5. Unfinished Business.
6. Adjournment.

DELEGATES TO ANNUAL MEETING

NOTE:—*Delegates* in Capitals, *Alternates* in lower case type. Number opposite County Society indicates paid membership.

Alpena—16

C. M. WILLIAMS
H. J. Burkholder

Northern Michigan Medical Society—Antrim,
Charlevoix, Emmet, Cheboygan—11

W. E. CHAPMAN
Don H. Duffie

Barry—10

B. C. SWIFT
A. W. Woodburne

Bay-Arenac-Iosco—59

D. T. SMITH
V. H. Dumond

Berrien—41

W. C. ELLET
R. H. Snowden

Branch—13

W. A. GRIFFITH
R. L. Wade

Calhoun—108

C. S. GORSLINE
GEORGE HAFFORD
W. L. Godfrey
W. F. Martin

Cass—7

Chippewa-Mackinac—15

G. A. CONRAD
F. H. Husband

Clinton—18

VERNON C. ABBOTT
W. B. McWilliams

Delta—21

A. L. LAING
J. K. Parish

Dickinson-Iron—14

C. W. WALKER
W. H. Alexander

Eaton—21

P. H. QUICK
S. A. Stealy

Genesee—119

C. F. MOLL
F. REEDER
W. H. WINCHESTER
M. S. Knapp
J. G. R. Manwaring
W. H. Marshall

Gogebic—21

Grand Traverse-Leelanau—23

Gratiot-Isabella-Clare—31

C. F. DU BOIS
M. J. Budge

Hillsdale—22

C. T. BOWER
G. R. Hanke

Houghton-Baraga-Keweenaw—38

W. T. KING
Geo. L. MacWaldie

Huron—7

Ingham—79

J. EARL McINTYRE
MILTON SHAW
O. H. Bruegel
Fred Huntley

Ionia-Montcalm—37

C. H. PEABODY
J. F. Pinkham

Jackson—62

CORWIN S. CLARKE
C. D. MUNRO
D. F. Kudner
W. L. Finton

Kalamazoo-Van Buren-Allegan—117

R. D. THOMPSON
D. J. SCHOLTEN
F. T. Andrews
L. E. Westcott

Kent—196

A. V. WENGER
G. H. SOUTHWICK
J. D. BROOK
H. J. PYLE
E. W. Schnoor
W. E. Wilson
J. S. Brotherhood
R. H. Spencer

Lapeer—20

H. B. ZEMMER
W. J. Kay

Lenawee—34

H. H. HAMMEL
R. G. B. Marsh

Luce—10

R. E. L. GIBSON
F. P. Bohn

Macomb—31

A. J. WARREN
W. H. Norton

Manistee—10

A. A. McKAY
H. D. Robinson

Marquette-Alger—37

Nels Robinson

Mason—11

Mecosta—14

WM. T. DODGE
Glenn Grieve

Menominee—11

JOHN T. KAYE
Edward Sawbridge

Midland—7

JOSEPH H. SHERK
George S. Orth

Monroe—30

S. J. RUBLEY
M. A. Hunter

Muskegon—60

V. S. LAURIN
F. Garber, Sr.

Newaygo—10

P. DRUMMOND
B. F. Black

Oakland—101

N. B. COLVIN
H. A. SIBLEY
Leon Cobb
Robert Baker

Oceana—8

W. L. GRIFFIN
J. D. Buskirk

**O. M. C. O. R. O.—(Otsego-Montmorency-Craw-
ford-Oscoda-Roscommon-Ogemaw)—7**

C. R. KEYPORT
Frank E. Abbott

Ontonagon—5

C. F. WHITESHIELD
E. J. Evans

Ottawa—29

R. H. NICHOLS
S. L. DeWitt

Saginaw—66

J. T. SAMPLE
J. W. Hutchinson

Sanilac—7

D. MAC NAUGHTON
R. B. Mitchell

Schoolcraft—6

W. E. THOMPSON
G. A. Shaw

Shiawassee—29

C. A. CRANE
None elected

St. Clair—49

R. C. FRASER
W. P. Derck

St. Joseph—15

CHARLES MORRIS
Dale Weir

Tri-County—(Wexford-Kalkaska-Missaukee)—18

W. JOE SMITH
S. C. Moore

Tuscola—24

U. G. SPOHN
R. L. Dixon

Washtenaw—123

THERON S. LANGFORD
JAMES D. BRUCE
Frederick A. Collier
J. A. Wessinger

Wayne—1,294

E. C. BAUMGARTEN
ANDREW P. BIDDLE
JOHN L. CHESTER
JAMES H. DEMPSTER
HARRY F. DIBBLE
H. B. GARNER
L. J. HIRSCHMAN
FRANK A. KELLY
R. E. LOUCKS
J. A. McGARVAH
ROGER V. WALKER
GEORGE J. BAKER
GEORGE VAN AMBER BROWN
A. E. CATHERWOOD
J. C. KENNING
C. F. McCLINTIC
F. M. MEADER
FRANK J. SLADEN
C. D. BROOKS
WM. J. CASSIDY
WM. P. WOODWORTH
WM. S. REVENO
S. W. INSLEY
C. C. BIRKELO
W. N. BRALEY
E. D. SPALDING
R. C. ANDRIES
Wm. Donald
L. T. Henderson
Wm. J. Stapleton
Geo. E. McKean
Harry L. Clark
Douglas Donald
Bruce C. Lockwood
Walter J. Wilson
J. Edwin Watson
Bernard Bernbaum
Henry A. Luce
Geo. E. Frothingham
E. B. Richey
E. D. Rothman
Louis J. Gariepy
J. D. Curtis
Wm. R. McClure
L. J. Morand
B. H. Priborsky
A. O. Brown
Charles A. Wilson
D. S. Brachman
F. D. Royce
H. M. Malejan
F. C. Buesser
F. H. Cole
Jay M. Burgess

WOMAN'S AUXILIARY

The State Woman's Auxiliary will hold its Annual Meeting at 2:00 P. M., Thursday afternoon. Further announcement will be made in the next issue.

Mrs. Guy L. Kiefer, President.
Mrs. J. E. McIntyre, Secretary.

ENTERTAINMENT FOR LADIES

This function will be assumed by the members of the Wayne County Woman's Auxiliary.

EXHIBITS

Scientific—Two rooms have been set aside for scientific exhibits. They will be

under the supervision of Doctors Davis and Evans.

Commercial Exhibits—The following firms will occupy space in the area allotted to Commercial Exhibits:

Cameron Electrical Company.
Medical Protective Company.
Swan-Meyers Company.
Kalak Company.
Laboratory Products.
Hanovia Company.
Maltine Company.
W. B. Saunders Company.
Horlicks Malted Milk.
Ingram Company.
Petrolagar.
Sharp and Smith.
Victor X-Ray Corporation.
J. F. Hartz Company.
C. V. Mosly Company.

ANNUAL MEETING

The preliminary program for our Annual Meeting to be held in Detroit, September 26-28th, is imparted in this issue. Read it. Note its excellent features and plan to attend.

The headquarters for all the sessions will be the Book-Cadillac Hotel. The accommodations are such that all our sessions will be under one roof, thus materially adding to our members' comfort as well as facilitating attendance upon the several section meetings. There are several hotels in immediate proximity to the Book-Cadillac where ample accommodations are available. We urge, however, that you secure hotel reservations.

That is all that will be said in this issue. Final announcements will appear in the September Journal.

The Trend of Medical Practice—The Medical Survey Committee of the California Medical Association has compiled some interesting findings that are enlightening to the troubled mind concerned with the trend of practice and state medicine. The rift lies largely in ourselves by reason of desertions of individuals and small groups as well as those serving corporations and industries.

TREND OF GENERAL MEDICAL PRACTICE

The outstanding trend of medical practice as far as the physicians themselves are concerned, seems to be toward specialization and salaried positions. (An excellent report with statistics on these two subjects by Dr. Weiskolten of Syracuse, New York, will be found on page 1046, Journal American Medical Association of March 31, 1928.) It can also be said that medical practice follows the hospital.

It is clear that the great changes taking place in the business world must, in some measure, be

reflected in the practice of medicine. The economic conditions that have brought about chain stores, chain banks, installment buying, must in time have their effect on every line of human endeavor. The great consolidations constantly taking place in the business world are causing a keener competition than ever before. Thousands of employes are being brought under one management, and the *health of these employes* becomes a vital factor in the success of the enterprise. Business men have learned from experience that good health among their employes pays big dividends, so now many department stores and industrial corporations have physicians regularly employed to look after the health of their employes as well as treat them for industrial injuries. This has opened up an entirely new field in industrial medicine and has provided many positions for physicians on either part or full-time salaries. Many of the industrial corporations which have either their own organization or a mutual hospital association among their employes are now considering extending this medical and hospital service in a limited way to the families of their employes.

It is constantly being borne in on those who have to do with the problem, that the *cost of medical and hospital care* is too great for the average wage-earner to meet. This is not the fault of the physician or the hospital, but seems to be caused by economic conditions which, at the present time, are beyond our control. The question of the cost of medical, hospital and nursing care is one that is receiving much study and is certainly deserving of continued consideration by the medical profession.

There are so many organizations dealing with *health matters*, that any consideration of the individual organization would be impossible in a report of this kind. Just to mention a few of these organizations whose work must have more or less influence on the general practitioner we have: federal government, state health boards, county health departments, health centers, city health departments, clinics (free and pay), county hospitals, industrial corporations, lodges, and hospital associations.

All of these and many more are engaged either in the prevention or treatment of disease.

It is apparent that each of the above agencies has its effect on the private practice of medicine, and as the dividing line between prevention and treatment becomes less marked the various public health agencies will have a greater effect on private practice than at the present time.

It is no doubt a question in the minds of some, whether or not the prevention of diphtheria, smallpox, measles, whooping-cough, scarlet fever, etc., belongs to the domain of the various health boards or the private physicians. Many of the *county hospitals* are now taking pay, or part-pay patients, and physicians are donating a tremendous amount of time and skill to these institutions. It will be found that most of the county hospitals that are well equipped and have good accommodations are receiving pay patients, and this practice promises to increase very much in the near future and is one of the problems that should be carefully considered by the profession.

There seems to be another trend in the practice of medicine which is being brought about by the public rather than the physician and that is the tendency or seeming *desire of the public to purchase their medical and hospital care on the installment plan*. There has been an amazing increase of lodge and hospital association practice

in this state, and we believe that this is a question which which merits very careful consideration and study. These hospital associations have caused dissention and bitterness among medical men in some localities. If there is sufficient demand for this kind of service from the public, something along these lines is going to be worked out in response to that demand, and it seems to us that the wise thing for the medical profession to do is to meet the issue squarely and give the question the necessary study to determine what is the best course of action in the interest of the public and physicians.

The *hospital associations* have been on of the factors which show the great influence that industrial medicine has had on private practice. The working man has got into the habit of being cared for when injured in industry, and is now looking for the same thing in case of sickness.

Physicians have become accustomed to the accident fee schedule and can see no reason for not treating the same class of people for sickness according to this fee system provided the fee is paid as surely and promptly as in industrial injury cases.

Any discussion of this question is beyond the scope of this report. We simply present the views of physicians as expressed to the committee.

In conclusion it can be said that the *trend of medical practice* is:

1. Specialization.
2. Salaried positions.
3. Practice in hospitals.
4. Grouping of physicians in same building.
5. Groups of physicians co-operating; that is, men in different lines working together but not in partnership.

Physicians and Health—We are quite in accord with Editor Bulson of Indiana and Dr. Brooks of New York as expressed by Dr. Bulson in the appended Editorial. We add—if our fellow doctors were imbued with a consciousness of honesty and consideration for others and ceased for selfish reasons to abet these social workers, (we do not refer to Health Officers) and Clinic proponents lay business would not dominate medical practice.

In discussing the question of the relation of physicians to public health, Dr. Harlow Brooks, of New York, before the Cattaraugus County Medical Society, of New York, had some very pertinent things to say concerning lay control of medical activities, and the pernicious influence of certain social workers who, if they had their way about it, would turn the country over to State Medicine. Dr. Brooks says:

"I know few rascals in the medical profession. I know few men in it who do not value their professional standards as high as life itself. I know few doctors who do not try to keep abreast of the times. I know few doctors who die rich. I know many doctors who devote their time as employes of business institutions; some of them are men of considerable capabilities but they have been dwarfed and curtailed by business control. Few of them frequent the libraries or medical societies. Eventually they become worth no more than the salary they receive. They are the result of the vaunted 'business control of medicine.' Many of them devote their time as secretaries and agents of organized charities. They are despised by

their employers, who would never trust them with their lives; they are useless to the profession, and they eventually become so 'organized' that they might as well be classed merely as lay secretaries.

"What does the physician in family practice resent in the activities of public health? He resents nurses doing the work of a physician, making diagnoses, and dictating treatment that the family physician should carry out. Do you blame him? He resents the underpaid, time-serving employe of the department, who from the wealth of his inexperience, minimizes to school children the work and ridicules the respect of their family doctor. He resents wholesale *septic* vaccination and other evidences of legal but bad practice. He resents snap diagnoses in cases to which he has perhaps given serious, experienced and intelligent study. He resents being directed to give treatments which he knows to be still in the experimental stage. He often has just cause for his complaints, because he knows himself to be the better man. This is all correctible. Nurses are nurses until they have studied medicine and legally qualified themselves as practitioners of medicine. They should not be allowed to do, as an agent of public medicine, work which the law does not permit them to do as private individuals. . . .

"Public medicine cannot be divorced from private medicine except at a loss to both. The most potent and influential teacher of public medicine is the physician in contact with his patient. No public medicine can succeed that has not had the endorsement of the average physician. . . . We of the medical profession believe that a license to practice should be granted only after four or more years of study in an accredited school, superimposed on a preliminary education of no mean extent. That this idea is not held by the public at large is only too visibly shown each year by all manner of cults, often backed by the clergy, well-intentioned philanthropists, financiers and people of all sorts, intelligent and otherwise. . . .

"Let us, through our state and county societies, enlist every doctor in the work of public health. Let us invite the co-operation of every honest lay body, but we must dominate. And we must insist that the professional standards which have made medicine shall still prevail, and that medical science shall control medicine in all its applications. Let us take over the city and county health organizations—too many of them are now taking us over. But we must demand that only the competent shall rule. We must demand that at all times the traditions and ethics of medicine shall be respected."

Preliminary Clinic Announcement—A two-day Clinical Program will be conducted at the Hurley Hospital, Flint, on October 24 and 25. Details of the program will be announced in a later issue. A similar clinic will be conducted in Grand Rapids in October for the benefit of our members in the western part of the state. The three-day Clinic at the University Hospital, Ann Arbor, will be conducted in November. Members are requested to note these dates. These clinics will equal any in the country and are provided for you within the boundary of your own state, thereby en-

tailoring a minimum of time and expense to participants.

HOW TO KILL A MEDICAL SOCIETY

Don't come to the meetings. If you do come, come late. If the weather doesn't suit you, don't think of coming. If you do attend a meeting, find fault with the work of the officers and other members. Never accept office, as it is easier to criticize than to do things. Nevertheless, get sore if you are not appointed to a committee; but if you are, do not attend the committee meetings.

If asked by the chairman to give your opinion regarding some important matter, tell him you have nothing to say. After the meeting, tell everyone how things ought to be done. Do nothing more than is absolutely necessary, but when other members roll up their sleeves and willingly and unselfishly use their ability to help matters along, howl that the organization is being run by a clique. Hold back your dues as long as possible, or don't pay them at all. Don't bother about getting new members.—The Aesculapian.

There are doctors among us to whom the above applies, but glory be, they are becoming less in number.

POST-GRADUATE CONFERENCES

The following are the programs that characterized the Post Graduate Conferences of the past month:

POST GRADUATE CONFERENCE—SEVENTH DISTRICT
MICHIGAN HOME AND TRAINING SCHOOL—
LAPEER, MICHIGAN, JUNE 28, 1928
PROGRAM

"Opening Statements"—T. F. Heavenrich, Councilor, Port Huron; H. E. Randall, President, Flint.

"Laboratory Methods for the General Practitioner"—H. E. Cope, M. D., Detroit.

"How the Local Physician Can Aid the Mentally Sub-Normal of His Own Community"—Mrs. Irma Waterbury, Lapeer.

"History Taking"—M. E. Wilson, M. D., Lapeer.

"Feeble-mindedness as a Social Problem"—W. J. Kay, M. D., Lapeer.

Luncheon

"How Physicians and State Hospitals Can Be More Helpful to Each Other"—E. A. Christian, M. D., Pontiac.

"Endocrine Disturbances in Childhood"—Raymond Hoobler, M. D., Detroit.

"Food Sensitization in Relation to Mental Ability to Carry On"—John Parsons, M. D., Ann Arbor.

"Relations Between Court and Physicians—How it Can Be Made More Helpful in Detecting and Controlling Feeble-mindedness"—Judge George Reed, Detroit.

"Pre-School Child and Diagnosing Mentality of Infants"—Dr. Blanche Weil, Psychologist, Flint.

"Aids in Detecting Mental Sub-Normality"—Miss Wilda Rosebrook, Psychologist, Lapeer.

"How Much Does General Appearance Indicate Mental Levels"—Miss Mary Scoville, Psychologist, Lapeer.

"Clinic—Presenting Different Types with Reference to Relationship of Physical and Mental Developments"—M. O. Blakeslee, M. D., Lapeer.

"Endocrinology"—Wm. G. Downs, Jr., Ann Arbor.

"Schizophrenia"—David R. Clark, M. D., Detroit.

POST GRADUATE CONFERENCE—13TH DISTRICT—
GAYLORD HOSPITAL, GAYLORD, MICHIGAN
JULY 18, 1928

PROGRAM

2:00 P. M.—"Opening Remarks"—B. H. VanLeuven, Councilor.

2:30 P. M.—"The More Common Diseases of the Ear"—W. B. Newton, M. D., Alpena.

3:00 P. M.—"Infant Feeding with Demonstrations"—Don H. Duffie, M. D., Central Lake.

3:30 P. M.—"Acute Abdominal Lesions"—F. C. Warnshuis, M. D., Grand Rapids.

4:00 P. M.—"Obstetrics"—F. C. Mayne, M. D., Cheboygan.

4:30 P. M.—"Observations from Clinic of Pauchet, DeMartel, Paris, France (Gastric Surgery)"—B. H. Van Leuven, M. D., Petoskey.

6:00 P. M.—Dinner—Masonic Temple.

EVENING SESSION—8:00 P. M.

PUBLIC MEETING—CITY AUDITORIUM

"The Water Supply in Northern Michigan Resorts"—Colonel E. D. Rich, Director of the Bureau of Engineering, Lansing.

"Value of a Personal Health Audit"—F. C. Warnshuis, M. D., State Medical Society, Grand Rapids.

SAINT CLAIR COUNTY

Regular meeting held at the Saint Clair Inn, Saint Clair, Michigan, Thursday, May 24, 1928. After a social hour and very fine dinner the meeting was called to order by President Smith, who requested Dr. J. H. Burley to act as Secretary. The following members and guests were present: Doctors Smith, McColl, Ryerson, Carney, Sites, MacPherson, Thomas, Grice, Cooper, Vroman, Morris, Callery, Webster, Windham, Lane, Waltz, DeGurse, B. E. Brush, Heavenrich, Bowden, Burley and Meredith, as guests Dr. L. R. Gaddis of Port Huron, Dr. Clark McColl of Detroit, Dr. M. J. McColl of Croswell and Mr. Percy Angove, supervisor, Vocational Rehabilitation, Department of Public Instruction.

Mr. Percy Angove addressed the Society and assembled Guests on Vocational Rehabilitation. Mr. Angove stated that three thousand subjects had been returned to work since the work had its inception. About twelve hundred cases are handled each year at a cost per case of ninety-five dollars. Funds for the work are provided by both State and Federal appropriations and \$72,000.00 is made available annually for this work. The State pays local Boards of Education two hundred dollars each year for each crippled child educated and at the age of sixteen the child is turned back to the State Vocational Department. During the past year the Board of Education of

Port Huron received three thousand dollars for education of the handicapped child.

Dr. A. L. Callery invited the members of the Profession to attend the Crippled Childrens' Clinic to be held at the port Huron Armory on May 25, 1928.

Dr. Clark McColl then addressed the Society upon "Hyperthyroidism." The speaker presented the subject in a very fine manner and all present were benefited. The matter was discussed by Doctors B. E. Brush, I. Bowden, T. Heavenrich, E. Sites, C. Thomas and others, after which Dr. Clark McColl closed his paper in the usual manner.

Dr. C. F. Thomas talked briefly upon the subject of the proposed new hospital or hospital unit for Port Huron and Dr. Heavenrich moved, supported by Dr. T. H. Cooper, that physicians each make an individual subscription to hospital fund in the event that a subscription was made. Carried.

Dr. F. V. Carney of Saint Clair invited the physicians of the County to utilize the new Saint Clair Hospital at any time it became necessary.

J. H. Burley, M. D., Secretary Pro Tempore.

Regular meeting held at the Saint Clair Inn, Saint Clair, Michigan, Thursday, June 21, 1928. After a social hour and splendid dinner the meeting was called to order by President Smith with the following members and guests present: Doctors Smith, Heavenrich, Thomas, Lane, Sites, McKenzie, Carney, B. E. Brush, McColl, Grice, Cooper, Burley, Bowden, DeGurse, Patterson, Derck, Clancy, Fraser and Caster, as guests, Dr. Wyman Barrett of Detroit and Dr. Don M. Campbell of Detroit also Dr. R. T. Getty, of Port Huron. President Smith requested Dr. Isaac Bowden to act as Secretary. Dr. Heavenrich asked how many would attend the District Conference at Lapeer, June 28, 1928 and eleven members promised to attend. The matter of holding monthly meetings during the summer was brought before the Society by President Smith and was decided in the affirmative and the next meeting was announced for July 19, 1928.

Dr. Wyman Barrett then addressed the Society on "Operative Treatment of Hyperthyroidism." The speaker presented the subject in a fine manner and the talk was very interesting to all present.

Dr. Barretts' paper was discussed by Doctors B. E. Brush, McKenzie, Burley, Bowden, Caster, Lane, Sites, Fraser, Cooper, McColl, Thomas and others after which Dr. Barrett closed in the usual manner.

Dr. Don M. Campbell addressed the Society upon, "Industrial Surgery of the Eye" and a copy of his paper is herewith enclosed. Dr. Campbell's paper was discussed by Doctors Fraser, Cooper, McKenbie, DeGurse, Lane, Carney, Burley and Smith, the latter thanking the speaker for his talk. Dr. Campbell then closed the discussion in the usual manner.

I. Bowden, M. D., Secretary Pro Tempore.

OAKLAND COUNTY

(Pontiac Press, June 23, 1928)

The story of the development of chemistry and the manufacture of synthetic drugs was told to members of the Oakland County Medical society at its regular meeting at the Board of Commerce Thursday evening. The speaker was Prof. F. F. Blicke, of the College of Pharmacy at the University of Michigan.

Prior to 1550, according to Professor Blicke,

the earth was searched by investigators of various sorts who sought the "philosopher's stone" by means of which the baser metals might be turned into gold. With the coming of Paracelsus, who was born in 1493, however, the search changed, as he taught that the object of chemistry "is not to make gold but to prepare medicines."

This period of medical chemistry soon came to an end, according to Professor Blicke, when chemists turned their interest from medicines to phlogiston, oxygen and to ideas regarding the nature of elements and compounds.

However, with the introduction of the first synthetic drug a few decades ago, a second period of medical chemistry was opened, and again one of the chief objects of chemistry is to prepare medicine. This period has been responsible, the professor stated, for some of the greatest advances made in medicine.

Many synthetic compounds are identical in every respect with the natural products, he asserted, and predicted that eventually all drugs may belong to the synthetic group.

"For progress," Professor Blicke asserted, "there must be close contact between the synthetic chemist, the pharmacologist, the clinician and the practising physician," a condition which he says does not exist in this country.

"We are dependent to a great degree upon the biochemist since in the end various changes produced by drugs in the body are changes within the cells and until our information regarding the chemical processes which take place within these primary units is greatly augmented the search for new medicinals must be conducted in a more or less empirical manner.

"It was due to this lack of contact between workers that either was not recognized as a valuable compound for anesthesia until four centuries after its discovery. Ethylene gas has been known for 100 years yet its use as an anesthetic was discovered only a few years ago.

"The carnation growers of Wisconsin had suffered losses repeatedly when their flowers were shipped into Chicago and kept in green houses. Two plant physiologists of the University of Chicago were consulted and they suspected illuminating gas from a defective gas main was responsible for the damage. Accordingly they found that a concentration of one part of ethylene in 2,000,000 parts of air caused carnations to close after 12 hours exposure. Then the effect of the gas on animals was determined and ethylene was found in 1923 to be a practical general anesthetic and within three years after its discovery it was estimated that in this country alone it was used in 50,000 operations."

C. A. Neafie, M. D., Secretary.

BERRIEN COUNTY

The Berrien County Society met in Niles at the Four Flags Hotel on June 28.

Following the dinner at 6:30 a brief business meeting was held in which it was decided to not have any meetings in July or August but to resume the monthly meetings in September.

This meeting was well attended. There were 32 at the dinner and several others came in afterwards for the papers.

The first paper of the evening was a brief, but skilful summary of arthritis. This was delivered by Dr. Harold Robinson, of the Grand Rapids Clinic.

The discussion of this paper was led by Dr. E. J. Witt, of St. Joseph, Dr. Witt's large experi-

ence with arthritis by his supervision of the mineral baths at the Hotel Whitcomb, made the discussion particularly worth while. An open discussion then took place by the other members which was of interest to all. Dr. Robinson then closed the discussion in a very able manner, going into details on particular questions of therapy, in reply to the discussants.

Dr. Alexander Campbell then gave an extremely interesting paper on gynecological problems in general practice. Dr. Campbell as an outstanding obstetrician and gynecologist gives a talk that for its appeal to general practitioners is hard to beat. His method of delivery and personality, combined with a knowledge of the conditions which face the average practitioner, makes his papers well worth the while of those fortunate enough to hear him.

His talk was accompanied by well prepared slides of pathology involved.

This paper was discussed by Dr. George Green of Dowagiac in a very able manner. Dr. Green's reputation as a surgeon in Cass County is well founded, as his discussion of Dr. Campbell's paper showed a wealth of experience.

The general discussion brought out other points of interest, and the completeness of Dr. Campbell's closing reply left his hearers with the impression that this was one of the most worth while talks one could desire.

The Berrien County Society wish to express their appreciation to these men for their trouble, and thank them for their aid in carrying out this Society's post-graduate lecture program.

W. C. Ellet, M. D. Secretary.

WOMAN'S AUXILIARY, MICH. STATE MEDICAL SOCIETY

MRS. GUY L. KIEFER, *President*
Lansing, Mich.

MRS. J. EARL MCINTYRE, *Secretary*
Lansing, Mich.

NATIONAL MEETING

The entertainment provided for women visitors to the A. M. A. convention held in Minneapolis in June was carried through without any apparent effort by the Woman's Auxiliary of the Hennepin County Medical Association, and every delegate and visitor left with a feeling of gratitude and kindness toward our hostesses. Nothing was left undone to add to our pleasure and this in spite of the fact that about one-third more lady visitors arrived than had been planned for.

June 11th was given over to registration in the morning. In the afternoon a reception and tea was held at the beautiful Art Institute, with Hennepin County Womans' Auxiliary acting as hostesses. At this time the retiring president, Mrs. John O. McReynolds received the guests also. She is a very gracious and charming person and the National Auxiliary is to be congratulated on having chosen her to fill the first office.

In the evening a dinner was tendered the wives of state officers of the Medical Societies and wives of the House of Delegates of the State and Medical Association. This was given at the Necollet Hotel by the State Auxiliary Association.

Tuesday morning was given to a nine o'clock session of the Executive Board of Woman's Auxiliary with Mrs. McReynolds and Mrs. Long presiding.

At this meeting we had the pleasure of hearing from all past presidents, as well as the president-elect, Mrs. Allen H. Bunce.

The nominating committee was named at this time and requested to make a report at the National Auxiliary meeting on Wednesday, June 13.

Reports of national officers were given at this meeting, with a very forceful talk by Mrs. Hoxie on the necessity of urging "Hygiene" to be used in schools and in fact everywhere we could find a place for it. The national association is standing back of this publication and doing everything possible to urge its use. So far the Woman's Auxiliary of Michigan has done nothing to place Hygeia before the schools, clubs, etc. This we will take up at our annual meeting.

The Presidents breakfast was held at twelve

o'clock at the Woman's Club, honoring past presidents, Mrs. C. T. Red, Mrs. F. P. Geogenbach and Mrs. Seale Harris, and the president-elect, Mrs. Allen H. Bunce. Mrs. McReynolds was hostess on this occasion, and she entertained forty guests. This was a very delightful and informal affair and the guests were very happy to accept Mrs. McReynolds' hospitality. After luncheon we were entertained by two artists of state auxiliaries, Mrs. Chappell and Mrs. Cregor.

By this time cars were waiting to take the guests for a drive around St. Paul and tea at the University Club, with Ramsey County Auxiliary as hostesses. The regular afternoon session was postponed until Wednesday.

The annual national auxiliary meeting was held at the Automobile Club and was called to order by Mrs. McReynolds at 10:30 a. m. on Wednesday, June 13.

A welcome to Minnesota was extended by Mrs. Ben Davis, president of Minnesota State Auxiliary, and a welcome to the Twin Cities by Mrs. Sweetzer, president Hennepin County Auxiliary and Mrs. Schultz, president Ramsey County Auxiliary. Responses were made by Mrs. G. Henry Mundt and Mrs. A. Haines Lippincott.

After this routine business was taken care of and some very interesting papers read, as follows:

1. Following Hygeia to rural schools, given by Mrs. A. B. McGlothlin.
2. An experiment in Health Education in rural schools by the Jackson County (Missouri) Auxiliary, Mrs. A. L. Skoog.
3. Plans for State Health Work, Mrs. H. B. Trigg.

The meeting was then adjourned for luncheon at which time we had as our official visitors Dr. Jabez Jackson, President A. M. A.

Dr. W. S. Thayer, President-elect; Dr. Morris Fishbein, Editor Hygeia and Journal to A. M. A.

The afternoon session was called to order with Mrs. David W. Parker presiding.

We had a very pleasant surprise in the presence of Dr. Lulu Hunt Peters, who entertained us with a talk on calories. She was a very delightful speaker.

Dr. Martha Welpton of San Diego, California

gave us "A Word from the West." She made a very favorable impression on her audience.

A very snappy talk on "our official duties was given by the President of the Missouri Auxiliary, Mrs. Willard Bartlett.

"Medical Legislation" was presented by Mrs. F. W. Cregor, President of the Indiana Auxiliary. "Fact Finding in State Medical History," by Mrs. A. T. McCormack, President Southern Medical Association was the last paper given for the afternoon.

The presentation of officers was then in order and Mrs. McReynolds retired in favor of the new President who gave a forceful short talk on "Our Outlook."

The meeting was then adjourned until Thursday afternoon.

Thursday morning was given over to a beautiful drive to the Country Clubs of Lake Minnetonka with luncheon at the Lafayette club.

The State Presidents' reports were given at the afternoon session, and it was a great pleasure to the writer to note that Michigan's president, Mrs. Guy L. Kiefer was one of the favorite speakers of the afternoon. Her report and the few extemporaneous remarks were received with a great deal of applause.

The nominating committee reported the name of Mrs. George H. Hoxie of Missouri as our new President-elect.

The meeting was then adjourned.

Friday, June 15 was given over to shopping for lady guests and a trip to Glen Lake Sanitarium.

The Executive Board, comprised of State Presidents, held a long session with the president, Mrs. Allen H. Burce, outlining its plans for the years activities.

And this finished the annual convention of the Woman's Auxiliary to the American Medical Association.

The meetings were all well attended and much interest was displayed.

One thing the Michigan delegates decided was that business meetings should be given over strictly to that with no social entertainment to be mingled with it—when the two are combined nothing was accomplished.

We are therefore anxious to have one day at our annual meeting in Detroit given over to annual election of officers, state reports, President's address, luncheon to be served during this session and one very interesting and entertaining speaker on the needs and uses of state auxiliaries. After that one day, which we hope may be decided on shortly, we hope the visitors will have no business but only pleasure to attend to.

Mrs. J. E. McIntyre, Secretary.

WOMAN'S AUXILIARY DEPARTMENT
ANNUAL REPORT FOR MICHIGAN AS GIVEN AT THE
CONVENTION OF THE WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL
ASSOCIATION IN JUNE, 1928

The Woman's Auxiliary to the Michigan State Medical Society was organized at Mackinac Island in June, 1927, with approximately twenty-five in attendance.

Mrs. Guy L. Kiefer of Detroit was unanimously chosen President and given the power to choose her officers for the year.

During 1927-28 we have organized fifteen Auxiliaries with 300 members, and have about five more counties in the process of organizing.

Child Health programs were arranged by our

State Health Board and sent to all county auxiliaries by the Secretary.

Our State Medical Society has given us substantial support throughout the year, in fact have been our mainstay, and we feel extremely grateful to the President and Secretary.

The annual state meeting will be held in Detroit in September 1928, at which time we hope to submit a program to be worked out during the coming year.

Mrs. Guy L. Kiefer, President.

MEDICAL SOCIETY IS ENTERTAINED BY AUXILIARY

A dinner dance which was one of the most delightful of the affairs which has been given at the Country club this season was sponsored by the Women's Auxiliary to the Bay County Medical society Wednesday evening.

Fifty were seated at the long tables for dinner, and floor space was left for dancing between courses. Great baskets of lilacs stood everywhere a nook could be found for them, and bowls of marigolds and sweet peas interspersed with ivory candles made the tables attractive.

Mrs. M. R. Slattery was the chairman of the affair, and it was one of the most successful parties ever sponsored by the auxiliary.

Sent in by Mrs. A. W. Herrick, President.

Hastings, Michigan, May 5, 1928.

Dear Mrs. McIntyre:

Your communication to Mrs. Kellar was handed to me a few days ago, and will try to answer your requests.

We are not a large Auxiliary, just ten members, but I believe, the first one organized.

In the first place for many years we have attended the monthly meetings of our Men's County Medical Society as their dinner guests usually going to some one's home or to some place of entertainment while the men held their meeting, so you see it was not hard to organize as we usually met once a month.

Perhaps we have not been very active, but last year we had a debate on birth control, current topics on the new things in Medical lines, sent flowers to sick members, etc., and generally finished the evening with bridge. Yes, I must not forget one evening we discussed "Would We Marry a Physician Again?" bringing out much merriment, also a poem from one of our members, but we have not yet developed any real serious plans for the coming year.

I wish to thank you for blanks on public activities in other counties.

Some of these have already been carried out in the County, but we should be able to find work to do from these programs of others.

Our officers for present year are:

President, Mrs. Guy C. Kellar, Hastings, Mich.
Treasurer, Mrs. Birge Swift, Middleville, Mich.
Secretary, Mrs. C. S. McIntyre, Hastings, Mich.

My Dear Mrs. McIntyre:

The most our Auxiliary has done this year is to become better acquainted with each other. We have only three regular meetings a year and tonight we have our last gathering. Besides our regular meetings we have had monthly pot-luck dinners, at the different homes, with a social evening following and it's surprising how many doctors' wives I didn't know.

The list of officers is as follows:

President, Mrs. F. T. Andrews, Kalamazoo.

First Vice President, Mrs. C. B. Fulkerson, Kalamazoo.

Secretary-Treasurer, R. J. Hubbell, Kalamazoo.
Second Vice President, Mrs. N. L. Goodrich,
South Haven.

Third Vice President, Mrs. W. R. Vaughn,
Plainwell.

Secretary-Treasurer, Mrs. R. J. Hubbell, Kalamazoo.

Sincerely, Mrs. R. J. Hubbell.

Ingham County Auxiliary has come to the front and shown its willingness to serve by promising aid to the Visiting Nurse Association. Funds are low and help is needed. Ingham held a sale for one day, homespun, baskets, Near East Relief articles, and cleared in the neighborhood of eighty dollars. This is to be turned over to the Visiting Nurse Association to help out current expenses for the year.

THE DOCTOR'S LIBRARY

Offering Suggestions and Recommendations

THE BRAIN FROM APE TO MAN*

The brain has long been a subject of interest and of wonder to man. With the application of scientific method to its study, nerve tissue has become increasingly more interesting. Its cells are most highly specialized and the most long lived in the body. They have an important bearing on the integration of an organism. The nervous system shows more clearly than any other part of brain structure, the varied influence of heredity and environment. For this reason it has been particularly difficult to treat the brain from the standpoint of comparative morphology.

However, in the primate groups of animals the phylogenetic trend involves increased complex brain development. Professor Tilney has made intimate examination of the brain development of the primates including man. He has developed a technique whereby brain tracts and brain nuclei may be quantitatively compared.

In treating of the brains of apes Dr. Tilney has for convenience considered three non-human groups which he refers to as the lower, intermediate and higher apes. In the lower group he considers the lemur, *Tarsius*, the marmoset and the spider monkey. The intermediate group consists of the baboon, the macacus and the gibbon. The three higher apes, the orang-outang, the chimpanzee, and the gorilla, form the third group. This grouping, although not phylogenetic seems to be indicated by the brain development. The anatomy of the brain stem of each of these is considered in some detail, representative cross sections serving as illustrations.

The method of treatment may be exemplified by the comparison of the extreme brain types considered in the work, namely that of the lemur and that of man. The lemur is a very active animal, entirely arboreal in its habits, spending its whole life in the tree tops, through which it can progress with the speed of a bird. The animal is somewhat catlike in general appearance, the fore and hind limbs being highly specialized for life in trees. In this animal most of the activities are of a reflex character in contrast with those of the human, which are deliberative. When startled by a loud sound, for instance, the animal immediately flees, rather than first ascertain the source of the sound and then determine its reaction

according to the nature of the disturbing stimulus.

In contrast to that of the human, the brain of the lemur presents notable peculiarities. The nucleus fastigii of the cerebellum and the vestibular nuclei are large, indicating a much more complex balancing mechanism. The fasciculus gracilis is larger and the fasciculus cuneatus is smaller than in the human. This means that the posterior extremities are more highly specialized than the anterior. The pons and pyramids are much smaller than in the human, signifying a small motor control by the higher brain centers. There is, in other words, a more limited range of skilled performance. The inferior colliculi are very large, indicating that the reaction to hearing is not deliberative. Sounds give rises to reflexes which are not strongly conditioned. The superior colliculi are highly developed, which bespeaks little visual telencephalization. The oculomotor nuclei show few internuclear fibers and the nuclei themselves are lowly developed, denoting that vision is only partly binocular.

Comparisons are similarly made between the brain structures in the various monkeys, lemurs, apes and man. We are able to trace rather definite morphological trends in brain development from the lower to the higher apes. The pyramids correlated with increased volitional control become greater developed. There is an increase in the development of the olivary nucleus with which we associate increased coordination of the head and neck. There is a falling off of the relative importance of the sensory conduction system from the hinder part of the body in favor of the fore limbs. In other words, with the increased specialization of the hand throughout the Primates the sensory control becomes correspondingly greater. The vestibular nuclei decrease throughout the series except in certain cases of the higher brachiating monkeys in which high development may be explained by adaptive radiation. The dentate nucleus and the red nucleus increase in size and differentiation. The superior colliculi decrease in complexity due to the reference of auditory stimuli from this region to the cortex. The decussation between the nuclei of the third nerve becomes more pronounced as we approach the higher apes. This is correlated with increased binocular vision. Most significant, perhaps, is the increase of the pontine elements, the high development of which is associated with increased body control. In general we may say that the trend of brain development in the primates is toward an increase in discriminative sensibility.

The author then goes on with a discussion of

* The Brain from Ape to Man. A contribution to the Study of the Evolution and Development of the Human Brain, by Frederick Tilney; with Chapters on the Reconstruction of the Gray Matter in the Primate Brain Stem by Henry Alsop Riley; Foreword by Henry Fairfield Osborn; 1120 Pages; 558 Illustrations, Many in Color; Two Volumes. Paul B. Hoeber, New York, 1928.

the brain development in the various extinct types of man comparing the brain with that of the apes and with modern man. The skulls of fossil men from Pithecanthropus to the Cro-magnon are submitted to treatment. Casts of the skull cavities of these indicate rather closely the degree of convolutional complexity and the size of the brain parts. By comparison of these with those of modern man, it is possible to get some knowledge of the mentality of our human predecessors. We may account through this method of research for the development of speech, the expansion of the visual and auditory cortex, the inception of right-handedness, and the establishment of human personality. On the basis of structure, the author concludes that the brain of man has not in its development reached a cul-de-sac but that there is considerable possibility of increased evolutionary development in man from the mental standpoint.

Professor Tilney's book is the result of years of neurological study and a surprisingly large part of the work is absolutely original. It is well reasoned and though the attitude is quite conservative, many far reaching conclusions are drawn. The method of writing the anatomical parts is particularly of interest. Whenever a nerve tract or a nucleus is mentioned it is connected functionally with the remainder of the brain stem so that the descriptions are vivid and dynamic rather than prosaic as such descriptions so frequently are. It would, however, have been preferable if a constant BNA nomenclature had been adopted rather than a mixture of this with the older terminology.

The book is well illustrated with pertinent photographs and with colored illustrations. It is completely indexed and has pages of reference for further reading. The only criticism that can be made regarding the make-up of the book is that it is somewhat bulky.

—W. T. DEMPSTER.

STORY OF ELECTRICITY, INCLUDING A CHRONOLOGY OF ELECTRICITY AND ELECTROTHERAPEUTICS—By Herman Goodman, M. D. With an introduction by Victor Robinson, M. D. Illustrated with 12 full-page portraits. Published by Medical Life Press, 12 Mt. Morris Park West, New York, N. Y.

The story of electricity resembles that of medicine in as much as it is the life history of personalities along with their achievements. While this book would seem to concern the physicist in his various activities, it also appeals to the physician. Electricity has come to play a very important part in therapy and indirectly in diagnosis. Besides interesting biographical sketches of those who have been most instrumental in developing the science, there is a chronological table of electricity and electrotherapeutics going back to 600 B. C.

THE COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION FOR 1927, VOLUME XIX—Edited by Mrs. M. H. Mellish and H. Burton Logie, M. D. Octavo volume of 1330 pages with 412 illustrations. W. B. Saunders Company, Philadelphia and London, 1928.

To this volume it is quite impossible to do justice in a brief review. It is a mine of up-to-date information of the best in medicine and surgery. The list of contributors is like a medical "Who's Who". Dr. William Mayo has three articles, "The Relation of the Basic Medical Science to Surgery," "The Relative Value of the Special Senses to the Surgeon," and "The Fourth Epoch of Medicine." Dr. Charles Mayo has an interesting article entitled, "The Value of Broadminded-

ness". "Graduate Medical Education in Europe" by Louis Burlson will be of great help to the physician who is going to Europe for study. "New Developments in the Treatment of Peptic Ulcer" by Andrew B. Rivers is a masterly presentation of this common disease. The surgeon will be interested in the many phases of work from this storehouse of surgery. The "Technic of Partial Gastrectomy for Cancer in the Stomach" by Donald C. Balfour. "The Results of Operations for Duodenal Ulcer in Physicians" by the same author giving the results of operations on 100 physicians is food for thought.—W. J. S.

A TEXT-BOOK OF BIOLOGIC ASSAYS—By Paul S. Pitenger, 373 pp, 153 illust. P. Blakiston's Son & Co., 1928.

This little book is a revision of the author's *Manual of Biochemic Drug Assay Methods*, 1914. It deals with the action and standardization of those drugs which do not readily submit to chemical analysis. There are chapters dealing with suprarenal gland products, ergot, the pituitary body, cannabis, piscidia, ephedra, vitamins, local anesthesia, and myotics and mydriatics. The book is essentially a textbook and laboratory handbook, considerable space being given to descriptions of apparatus and technique. Official and unofficial standards are recorded.

CLINICAL MEDICINE—By Oscar W. Bethea, M. D., Ph. G., Professor of Therapeutics, Tulane Graduate School of Medicine; Professor of Clinical Therapeutics, Tulane School of Medicine, New Orleans, La. Octavo volume of 700 pages. W. B. Saunders Company, Philadelphia and London, 1928.

This is a book on what is commonly known as Practice. The author is a teacher of both clinical medicine and therapeutics. His effort as stated by himself, has been to put into a volume of moderate size the latest and most generally accepted information as to diagnosis and treatment of about one hundred of the most common diseases coming within the province of internal medicine. The work concerns itself with information that is in general agreement among internists. The discussion of controverted theories has been left to the larger works of which the field of medicine is well supplied. Many will welcome the attention paid to therapeutics in which the work rivals and in fact surpasses many of the larger works in practice. Prescriptions are written in both the apothecaries and the metric system. The book will be found of real value not only to the undergraduate but to physician as well who would supplement his library by a work that deals in a clear cut way with essentials.

ADDRESSES ON SURGICAL SUBJECTS—By Sir Berkeley Moynihan, Bart., President of the Royal College of Surgeons of England. Octavo of 348 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1928.

This book consists of essays and addresses which first appeared in several British Medical Journals, also in Surgery, Gynecology and Obstetrics. The opening chapter deals with the subject of "Hunter's Ideals and Lister's Practice." Among other subjects treated are "The Debt of Pure Science to Medicine," "The Relationship of Radiology and Surgery," "Cancer and How to Fight It," "Lister as a Surgeon, as a Benefactor of Mankind," "The Gallbladder and its Infection." The essays or addresses are written in that charming diction of which the British savant is so capable. The appeal is much broader than surgery; it is not only medical but the volume will enlist the interest of the cultured layman as well.

PRINCIPLES AND PRACTICE OF OBSTETRICS—Joseph B. DeLee, A. M., M. D. Professor of Obstetrics, Northwestern University Medical School. Fifth Edition, Thoroughly Revised. Large octavo of 1140 pages, with 1128 illustrations, 201 in colors. W. B. Saunders Company, Philadelphia and London, 1928. Cloth, \$12.00 net.

The appearance of a new edition of this well known work is an item of much interest to obstetricians and indeed to all physicians who conduct obstetrical cases. There are no radical changes from the fourth edition. However, as we might expect, the present edition is larger than any previous one. The increase has been made necessary chiefly by the increased space devoted to practical matter, much of it for the general practitioner. The chapters on the treatment of hyperemesis, eclampsia, abruptio placentae, and placenta praevia have been largely rewritten. Many new illustrations appear. The chapter on forceps has been enlarged and new illustrations have been added. The author describes the procedure of temporarily explanting the infected uterus in doing Caesarean section. This operation which was first done by Gottschalk has been reviewed by Portes and promises to have considerable usefulness.

Special mention should be made of the chapter on forceps. It is thirty-six pages in length and profusely illustrated. Forceps delivery is a subject of supreme importance and this is an excellent discussion. The Kielland forceps which is now being highly praised and widely used in Europe is discussed; the author concedes its usefulness, but seems to feel that an unnecessary furor is being raised about it.

The low cervical section which DeLee has always championed is described at greater length than in the last edition. The distinguished author has done much good in emphasizing the benefits of this form of section.

DeLee, who has been one of the most progressive of obstetricians and much of an innovator seems to be growing a little more cautious. The alacrity with which untrained operators attempt difficult obstetrical procedures has made obstetrical writers feel that they dare not encourage radical measures. This situation is not conducive to new developments in obstetric practice.

Unlike most obstetrical authors, DeLee does not assume that men are born with an instinctive knowledge of episiotomy repair; he describes and pictures this much neglected bit of work—C. E. D.

THE SURGICAL CLINICS OF NORTH AMERICA—April, 1928, Volume 8, Number 2; New York Number. W. B. Saunders Company, Philadelphia and London.

Among the clinics here presented is that of Dr. John F. Erdmann of the New York Post-Graduate Medical School, on operative procedures in the fibroid uterus. Dr. Howard Lileinthal deals with surgery of tuberculosis of the lungs by two different methods. Dr. John Moorhead's contribution will appeal to the orthopedist and industrial surgeon as it discusses fracture of the head of the radius, arthrotomy of the knee joint, arthritis, plaster block splints, and physiotherapy after injury. There are ten other contributions dealing with practical applications of surgery. The various clinical reports are well illustrated.

A MANUAL OF THE PRACTICE OF MEDICINE—A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania. Twelfth edition, Revised. 12 mo of 657 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1928. Cloth, \$3.50 net.

This little book first appeared in 1892, since which time it has gone through to the twelfth edition. The past thirty-six years has virtually seen

modern medicine come into being. Steven's Manual of Practice with its 600 pages has chronicled the advances that have taken place during this period. Many of the former subjects treated have been re-written and sections dealing with epidemic streptococcus sore throat, chronic ulcerative colitis, Epstein's nephrosis, essential arterial hypertension, sickle-cell anemia, rat-bite fever and tularemia have been added. The busy practitioner will find this work an ideal desk companion. It is well indexed for ready reference.

THE EXAMINATION OF PATIENTS—Second Edition, by Nellis B. Foster, Associate Physician to the New York Hospital; Associate Professor of Medicine at Cornell University College of Medicine. Published by W. B. Saunders Company, Philadelphia. Price \$4.50, 392 pages.

The preface, "Why Do Doctors So Often Make Mistakes?" a quotation from the *Journal Interne* of Henri Frederich Amiel, Schevenunger, Aug. 22, 1873, is good. This book is filled with good material for the every day practice of medicine. The author takes up the theory of diagnosis, the assembling of data and then in order the examination of the various parts of the body. This is followed by special examination and the various tests. He also gives a list of the principal causes of illness in the United States. Thus the student if he will can become more conversant with these in more detail and thus be a better doctor. There are numerous X-ray and other illustrations besides a very complete index.—W. J. S.

GONOCOCCAL URETHRITIS IN THE MALE, FOR PRACTITIONERS—P. S. Pelouze, M. D., Associate in Urology and Assistant Genito-Urinary Surgeon at the University of Pennsylvania. Octavo volume of 357 pages, illustrated. Cloth, \$5.00. W. B. Saunders Company, Philadelphia and London, 1928.

The author has presented the case of gonorrhea in a clear and concise manner. There has been much confusion in the past in regard to this ever present malady. The whole subject has been covered in a manner never before presented. The chapters on treatment will greatly aid the practitioner in planning his campaign for the cure of a disease which is one of the most difficult encountered. Much thought has been given the question from a sociological standpoint. This contribution to a subject so little understood by the average practitioner is one that will be read and studied to advantage by everyone practicing general medicine.—W. C. M.

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In many cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

AN ANNOUNCEMENT TO THE AMERICAN MEDICAL PROFESSION

In a few weeks we expect to inaugurate a policy of general advertising in a number of popular magazines. This decision is one that could not have been reached by us without the careful deliberation of our officers, the advice of our medical staff, and the whole-hearted approval of hundreds of our medical friends.

The object of this letter, addressed to every American physician, is to give the entire medical profession of the country advance information as to the exact significance of this new step of ours.

Hence the enclosures, facsimile reproductions

of the first two advertisements that have been planned. They will give you at a glance a fair idea of what we propose to do. Much of the "copy" is to be "institutional" in nature, and will emphasize the importance of getting medical advice from a physician, will preach the doctrine of periodic health examinations, and tell the story of medical science and the contributions the profession has made toward the prevention of disease. The dangers of self-medication will be specifically pointed out. Whatever products of ours may be mentioned in this series of advertisements will be entirely of a "household" nature—tooth paste, shaving cream, mouth wash, etc.—and will not in any sense encroach on the physician's prerogative.

Perhaps you are already a subscriber to one or more of the publications we are planning to use—Saturday Evening Post, Literary Digest, Hygeia, Collier's, National Geographic—and will, in the natural course of events, see our advertisements as they appear from time to time. At any rate we will appreciate it very much if you will watch for them and see for yourself how carefully we have planned to enlarge the scope of our service without deviating one iota from our rigid code of ethics.

Parke, Davis & Co.

CHOLECYSTOGRAPHY—WHAT IS ITS MEANING?

It would seem appropriate to state briefly the generally accepted diagnostic interpretation of a negative and a positive cholecystogram as judged from a review of the literature. In a patient with a normal liver, normal gallbladder and unobstructed ducts, the dye introduced either intravenously or by mouth reaches the liver, passes out in the bile, enters the gallbladder by way of the cystic duct, is visualized by the roentgen ray, increases its density of shadow and is gradually discharged from the gallbladder, all within reasonably established normal time limits unless the gallbladder emptying is accepted as a result of food products reaching the duodenum, particularly those rich in fat, such as cream, butter and egg yolk. It has been found, too, that variations in the size, shape and positions of the gallbladder, as well as its rate of emptying, bear a definite relation to the general habitus of the patient. The essentials, then, of a negative cholecystogram suggesting normal health of the gallbladder consist of its proper filling, its proper concentration, and its proper rate of emptying of the dye, especially when responding to the influence of the Boyden meal, with evidence of normal contractility and absence of deformity of the gallbladder wall.

The positive cholecystogram interpreted to indicate disease of the gallbladder consists in (1) failure of visualization of the gallbladder suggesting either (a) an obstruction of the cystic duct or (b) a gallbladder content made up of a solitary calculus or thickened gallbladder mud, so static as not to receive a fresh admixture of dye-stained bile; (2) a partial visualization of the gallbladder with mottled areas suggesting calculi or positive or negative shadows of gallstones, in which instance it may be inferred that the cystic duct is not completely occluded; (3) an imperfect visualization of the gallbladder with failure of the dye to concentrate, suggesting disease of the gallbladder sufficient to impair this function; (4) delayed filling, concentrating or emptying of the gallbladder, or a deformed silhouette suggesting

adhesions. A positive cholecystogram, therefore, is inferentially accepted as an indication of gallbladder disease requiring surgical intervention. Here lies a possibility of three errors in diagnosis of considerable importance to the patient. The first, and by far the less common one, is disease of the liver preventing excretion of the dye in sufficient concentration. The second possibility, of more frequent occurrence, may be dysfunction of the duodenum or of the termination of the common duct producing abnormal relaxation of either of them, whereby the dye-laden bile passes out directly into the duodenum and so prevents visualization of the gallbladder. Furthermore, if the oral method is used, disturbed absorptive power of the intestine may in some instances contribute to poor visualization; or, if diarrhea occurs, intestinal hypermotility, interfering with proper absorption, may be a factor. These possibilities we will leave for future consideration. The third and quite common possibility of error concerns obstruction of the cystic duct by catarrh or inflammatory edema, an obstruction which may be either partial or complete. Obviously, any of these conditions may prevent visualization of the gallbladder and account for cases in which a normal gallbladder is found at operation. It is quite true that the intravenous administration of the dye in such cases tends to minimize the frequency of this error of interpretation; nevertheless, it can occur despite this method of use.—Lyon and Swalin in the Journal A. M. A.

TREATMENT OF MONGOLOID IDIOTS

Mongoloid idiots—those baffling cases of defective children that look like flat-faced oriental dolls—may be reclaimed from their smiling, contented state of idiocy and in some cases may even reach practically normal intelligence. This was the encouraging report made today by Dr. Walter Timme, of New York, before the American Association for the Study of the Feeble-minded, meeting here.

The cause of Mongolism and how to treat it are still uncertain, though it is generally recognized as a gland disorder. Working on this theory, Dr. Timme stated that he has been feeding Mongoloid patients pituitary substance, both of the whole gland and particularly of the fore lobe of the gland. "As a result of ten years of this work, I have brought many of my Mongoloid patients to much higher levels than we have heretofore been able to do," he said.

Some of these children who had started in life with the prospect of remaining idiots, unable to dress themselves, talk properly, or even eat like normal children, learned to do arithmetic up to multiplication by three or more figures and long division. They also learned to write letters and do oral arithmetic, which is remarkable achievement for these cases.—Science Service.

FOOD'S UTILIZATION UNAFFECTED BY OIL

Food is digested, absorbed and made available for doing the body's work just as effectively when liquid petrolatum is added to the diet as when inert laxative oil is not taken with the food. To the American Medical Association, Minneapolis, Dr. Alfred B. Olsen of Battle Creek Sanitarium reported experiments on dogs and human beings that settled this moot medical question.—Science Service.

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DISEASES OF THE STOMACH AND DUODENUM*

DONALD C. BALFOUR, M. D.

ROCHESTER, MINNESOTA

The subject I have chosen, diseases of the stomach and duodenum, is peculiarly appropriate for this occasion because of the part the donor of this lectureship has taken in the development of the surgical treatment of these diseases. And since it has been my good fortune that the donor has been my teacher, my remarks may be regarded as a reflection of his teaching.

Dyspepsia or indigestion is one of the most common and at the same time most important of the ailments of the human race. The condition is so common in this country that it has been called the great American disease. Probably the breakdown in the power of properly digesting food is due to the pace of modern living, improper food, irregular hours of eating, excessive use of highly concentrated food, and lack of leisure. The stress of modern life is such that there is a tendency to forget the importance of the old adage, "alternate rest and labor, long endure."

The causes of dyspepsia are most varied and it is essential that the general types be differentiated. The dyspepsias may be conveniently divided into three general groups: functional, reflex and organic.

FUNCTIONAL DYSPEPSIA

The chief characteristic of functional dyspepsia is that it is usually continuous and the patients are often of the asthenic type, that is, their condition either conforms to the type classified as chronic nervous exhaustion or the borderline of this very unfortunate state. Functional dyspepsia stands first both in frequency and in the degree of annoyance and suffering that it causes the patient. It is difficult to control since it is dependent on fundamental faults in the individual and it is only by a slow building-up process of the reserve force that the stomach in turn will function normally. This building-up process is tedious and must be carried out under the direction of a physician who understands not only the condition, but the

* The Mayo Lecture in Surgery delivered at the University of Michigan, October 18, 1927.

patient. The patient must have absolute confidence in the physician and, above everything, must have faith that the plan he is following will bring satisfactory results. Lack of faith results in many failures and turns the patient to those irregular practioners and quacks who, because of their positive assertion that they know the exact cause of the ailment and their equal assurance that they can cure the patient, inspire faith which in many instances alone will bring about a good result. It is, however, essential that the physician is not deceived by the patient who obviously is suffering from functional dyspepsia but who may (although the law of compensation apparently gives him a higher protection against serious organic disease than the normal person) also have serious organic disease in the stomach or duodenum or in some other organ of the body. One of the physician's most humiliating experiences is to attribute all the patient's ills to a functional disorder and then discover, or have some one else discover, some organic trouble which is responsible for at least part of the patient's trouble.

REFLEX DYSPEPSIA

This type of dyspepsia is the result of a disease process in some part of the body, usually in the gall-bladder and the biliary tract. The most common symptom of gall-bladder disease is dyspepsia and most patients complain of gaseous distention and distress from certain kinds of food, thus attributing their trouble to the stomach itself. A less common symptom is recurring appendicitis, but in almost any acute or chronic disease the stomach may be acutely or chronically disturbed. It is hardly necessary to describe the acute form because it is familiar to all students except the favored few to whom examinations are not to be feared.

ORGANIC DYSPEPSIA

For present purposes the important dyspepsias are the organic, that is, those dependent on actual lesions of the stomach and duodenum. Such dyspepsias may vary greatly. The dyspepsia of ulcer may be so distressing as to prevent the patient from carrying on his usual daily work or it may be so light that he considers it hardly worthy of attention. The most significant fact is that a severe type of dyspepsia may mean a small and insignificant lesion whereas slight dyspepsia may mean carcinoma of the stomach. The supreme importance, therefore, of the differentiation

of the various types of dyspepsia is apparent.

DIAGNOSIS

One of the fundamental factors in the diagnosis of ulcer of the stomach is that the dyspepsia, whatever form it may take, is usually intermittent. This feature distinguishes it from functional dyspepsia in which the complaint is, as I have said, continuous. The chief characteristic of the dyspepsia of ulcer is its intermittency and that it is practically always related to food, the usual sequence being pain, food, ease, pain. The intervals between pain are governed to a considerable extent by the situation of the lesion, the characteristic time for ulcers which involve the duodenum being about three hours after the ingestion of food.

In carcinoma of the stomach dyspepsia is a rare and late manifestation, and if any progress is to be made in the early diagnosis of carcinoma, (which is the only way that progress in the treatment of carcinoma of the stomach can be made at the present time, because an early diagnosis often permits removal of the growth), we should evaluate the few early signs that are manifested by carcinoma. Patients in middle life who suffer any form of indigestion should have the possibility of carcinoma excluded by a most competent physician.

The details of the symptoms of diseases of the stomach and duodenum are not within the compass of this lecture. I would urge, however, that in all cases of dyspepsia a complete examination be made to exclude or establish possible lesions of the stomach. One of the most significant examples of the danger of overlooking disease is found in cases of benign tumor of the stomach. Many such patients have perfect digestion but come to the physician because of secondary anemia. There may have been no evidence of gross bleeding and it is only on fluoroscopic examination that the tumor can be detected. Very small benign tumors can be the cause of most profound anemic states.

It is at least theoretically true that no disease can be satisfactorily treated unless the nature and causes are known. Much is known about the nature and cause of various diseases of the stomach but also much remains to be known. Aschoff has recently directed attention to this point, namely that the reason why an acute erosion does not heal is more important than the cause of the acute erosion. Much experimental work has been done with refer-

ence to the cause of the most common organic disease of the stomach, peptic ulcer. Such ulcers can be produced experimentally in a great many ways, but most of them are the acute type that heal rapidly and do not simulate the chronic ulcer seen in man. Chronic ulcers, however, can be consistently produced by a method of excluding the alkaline secreting mechanism. Mann and Williamson have been able to produce experimentally in dogs chronic peptic ulcers having the same characteristics as those in man. The method is summarized by Mann as follows: "The pylorus is sectioned and the distal end closed. The first portion of the jejunum is sectioned and the distal end anastomosed to the pyloric end of the stomach. The proximal end of the jejunum is drained into the ileum at a distance greater than 50 cm. from the pyloric anastomosis." The ulcer begins to form approximately one month after the operation and occurs in the jejunum just distal to the anastomosis with the stomach at a point described as "where the acid gastric contents strike first and with the greatest force on the jejunal mucosa," which is accustomed to an alkaline content, and it may spread to include the line of suture. The ulcers have a tendency to develop and to perforate as similar ulcers in man. They will heal if protected from the gastric content. There is suggested in this experiment a mechanical and chemical explanation for the production of jejunal ulcers, or at least chronicity, and also for the chronicity of peptic ulcer in man.

Morton has shown by a series of experiments that the rapidity and the completeness of healing varies in different parts of the stomach. For instance, defects produced in the mucosa at various sites show that healing is most rapid along the greater curvature and most retarded on or near the lesser curvature, demonstrating experimentally one reason for the frequency with which chronic ulcers are found in the neighborhood of the lesser curvature of the stomach. Why there is such a high (more than 90 per cent) incidence of ulcers along the lesser curvature is conjectural but the fact that the lines of force and consequently the greatest trauma are along the lesser curvature offers a possible explanation.

Probably the most important factor in the inability of a mucosal erosion to heal is abnormal function. Sir James McKenzie in his later writings emphasized strongly the fact that disease is, in the

last analysis, usually dependent on the persistence of deviations from the normal function of a given organ. The exact function, for example, of the pylorus which certainly is a large factor in the production and maintenance of both gastric and duodenal ulcer is unknown. It is an interesting fact that there is no continuity of the musculature of the stomach and the duodenum; and Horton has also shown that there is practically no direct connection between the lymphatics of the stomach and the duodenum. In other words, the pylorus more or less completely divides the stomach and the duodenum. This is interestingly shown in carcinoma of the stomach which, regardless of how extensive it may be, will practically never extend beyond the pylorus to involve the duodenum.

A very important cause of gastric ulcer is unquestionably bacterial infection. Rose now's experiments, showing that ulcers can be produced in a certain percentage of cases by cultures made from organisms secured from ulcers in man, have been confirmed. Another significant factor in connection with the inability of certain ulcers to heal concerns the process by which healing takes place. Mann and Caylor, in experimentally produced ulcers, have shown that attempts at healing are constantly taking place. Such attempts are made through the development of buds of granulation tissue in the base of the ulcer; whether the ulcer is large or small and whatever constitutes its base, healing depends on whether or not such granulation buds are developed. The fact that a long-standing ulcer often develops such fibrotic changes in its base and that consequently no granulation tissue buds can be produced, explains why such ulcers cannot heal. The chief factor in healing, therefore, is the formation in the base of the ulcer of a plug of granulation tissue with an epithelial layer of single flat cells growing out, secondarily, from the margin of the lesion to cover the granulation tissue. The alternating character of the activities of ulcer of the stomach, if one may judge by the intermittence of the symptoms, may be due to the loss of this thin layer of tissue, by trauma or digestive juices. Mann believes this and also that the breaking off of these granulation buds explains the type of hemorrhage usually seen.

The cause of carcinoma of the stomach is, unfortunately, not known. There is, however, one type which is unquestionably

secondary to chronic ulceration of the stomach, just as carcinoma may develop in chronic ulcers in any other part of the body. The common form of carcinoma, however, is one which is primary and the cause of which is not any more understood than the cause of carcinoma in other parts of the body.

Of the more rare diseases of the stomach there is syphilis, caused by the *Spirochaeta pallida*. Gastric syphilis, however, does not occur more than one in a thousand cases of syphilitic infection. Tuberculosis of the stomach is extraordinarily rare and is caused by the invasion of the bacillus of tuberculosis.

DIFFERENTIAL DIAGNOSIS

I have already referred in a general way to the diagnosis of the various types of lesions of the stomach and duodenum. It may first be put down almost as an aphorism that persons who have chronic indigestion, periodically manifested, are likely to be harboring peptic ulcers either in the stomach or in the duodenum. In many cases the diagnosis must be made without any aid from the history, particularly if complications have ensued such as hemorrhage, obstruction, or subacute perforation. Fortunately, in most cases it is possible to employ aids that are extremely important.

So far as the diagnosis of gastric and duodenal ulcer is concerned, the outstanding advance which has been made in the last decade has been the recognition of these lesions by the roentgen ray. The mere fact that an ulcer of the stomach can be visualized by any method has been a great contribution to our knowledge of the disease; and such visualization is so precise that lesions which are difficult to demonstrate at the operating table can be definitely demonstrated by the roentgen ray. In duodenal ulcer it is seldom that the actual ulcer can be visualized, but the competent radiologist can, by indirect signs, arrive at a correct diagnosis in a large percentage of cases. The typical syndrome of both gastric and duodenal ulcer is too well known to require comment, but it should be emphasized that the uninterrupted course of gastric and duodenal ulcers is distinguished by the fact that the symptoms become progressively worse after the ulcer has become established. This is particularly true of gastric ulcer and its symptoms usually show clearly that it is a much more serious lesion than duodenal ulcer, and also a

greater menace to the patient. When the roentgen ray shows a lesion to be present in the stomach, regardless of the severity or character of the symptoms and the degree of the patient's disability, the fact that there are three out of four chances that the lesion is malignant should always be borne in mind and the patient advised accordingly.

Symptoms of ulcer may exist for a great many years, some patients being able to keep themselves in reasonable comfort by a strict diet during attacks and by frequent holidays. Patients coming for consultation and treatment state that the average length of time symptoms exist is becoming less and less.

The characteristic signs of acute perforation of peptic ulcer are sudden severe abdominal pain with rigidity in the abdominal muscles and increasing evidence of shock. The fact that early operation is the only chance of saving the patient's life and that in the first few hours operation is as safe as any abdominal operation, has been repeatedly proved. It is also realized that after the early hours have passed operation is less and less likely to save the patient's life. Subacute perforation may also be suspected from the history of the patient, and the severity and situation of the pain. In ulcers situated on the posterior wall (and this is the most common situation for gastric ulcer and for duodenal ulcer) subacute perforation with attachments to structures behind the stomach and duodenum are usually followed by a change of symptoms and are usually accompanied by lumbar pain.

Gastric hemorrhage may be most confusing both from the standpoint of deciding on the source of the hemorrhage, (that is, whether an ulcer actually is present or not), and the determination of what is the best form of treatment. It is well to emphasize that there are many causes for gastric hemorrhage other than ulcer, both intragastric and extragastric, and although ulcer is the most common cause, there are many pitfalls in assuming the bleeding to be due to ulcer.

The diagnosis of obstruction may be made from the data brought out in the clinical history of the patient: a history of food retention, by motor meal, and by analysis of the gastric contents. A significant phase of cases of obstruction is concerned with the fact that there may be toxemia of varying degree associated with such obstruction and that this toxemia manifests itself in the increase in the blood

urea, in the carbon dioxide combining power of the plasma (alkalosis), and in the decrease of the blood chloride. Mc-Vicar has also shown that tetany may be anticipated when the carbon dioxide combining power exceeds 100 per cent by volume. It is not only by estimating these factors, but also by restoring them to normal, that the internist is able to contribute so much to the safe management of such cases. Such restoration is accomplished by intravenous administration of sodium chloride solution and 10 per cent glucose, and by the avoidance of alkalis. Under such management the improvement in patients, even when in a condition so critical as to be beyond the control of other measures of relief, is most striking, and constitutes an advance in treatment which is little less than epoch making.

The recognition of carcinoma developing on ulcer cannot be depended on. It is dangerous to believe that such changes can be recognized because if they are recognizable the opportunity for curing the patient has probably gone by. The two most important facts in connection with carcinomatous degeneration of gastric ulcer are that it does occur, and that there is no known means of its early recognition.

The value of the test-meal in differentiating organic and functional disease of the stomach is important but not absolutely reliable. It is usually found that peptic ulcer is associated with hyperacidity but the fact that the acids may be normal or that there may even be hypoacidity will guard one against depending too much on making such analysis. This is also true in carcinoma of the stomach, and to assume that carcinoma is not present because there is free hydrochloric acid in the stomach may be a very unfortunate error, because in almost half of such cases free hydrochloric acid is found.

TREATMENT

The treatment of the lesions of the stomach to which I have referred, can be summed up briefly. In case of carcinoma of the stomach the only possibility of cure is removal. In case of gastric ulcer, unless there are marked contraindications to operation, it is safer to remove the lesion. In case of uncomplicated duodenal ulcer the advisability of operation depends on the degree of disability. The longer symptoms of the ulcer have existed the more definite are the indications for operation. In duodenal ulcer with complica-

tions, that is, hemorrhage, perforation and obstruction, operation is clearly indicated. It is not my purpose here to discuss the details of operative procedures, but it may be said that the important principles in gastric ulcer are that the lesion should be completely removed if possible and adequate drainage established. In duodenal ulcer, excellent results may be obtained by an indirect operation, usually gastro-enterostomy. In gastric carcinoma the purpose of operation is to remove the growth and the regional lymph nodes, and restore gastro-intestinal continuity by some suitable method of anastomosis.

THE USE OF LIPIODOL IN THE
EARLY DIAGNOSIS OF
PREGNANCY*

M. PIERCE RUCKER, M. D.
L. J. WHITEHEAD, M. D.
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The signs of early pregnancy fall into two categories (1) physical changes in the reproductive organs, (2) biochemical reactions. The hope that the Roentgen ray would help in interpreting early physical changes, is only just now being realized. The demonstration of fetal bones with the aid of X-ray is not possible before the third or fourth month. Edling claims to have photographed fetal bones in utero early in the third month, but this has been questioned by Bartholomew and others. Leiser says that in the Dresden clinic no fetal bones could be demonstrated before the twelfth week. Between the fourteenth and twentieth weeks most cases were positive. Quite recently Jungmann describes a technic by which fetal bones may be shown in the eighth or ninth week, but his work has not been confirmed.

With pneumoperitoneum and X-ray, Peterson demonstrated a characteristic broadening of the isthmus of the uterus in early pregnancy. Burch, using Peterson's technic, found what he believes to be a pathognomonic sign of pregnancy, viz: a much thickened uterine wall, with a distinct cavity containing a mass. Peterson in a later paper states that the interpretation of the shadows in pneumoperitoneum is too difficult and says that an absolute diagnosis of pregnancy must rest upon demonstrating the fetus in some unmistak-

* Presented before the Post-Graduate Conference held under the auspices of the Michigan State Medical Society, the Wayne County Medical Society and the Alumni Association of the Detroit College of Medicine and Surgery, May 14-17, 1928.

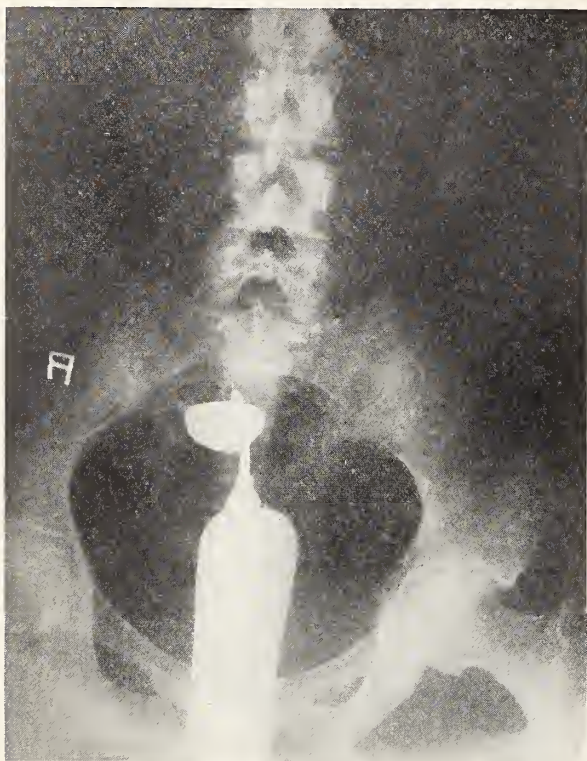


Figure 1. (Case 13)
Early pregnancy showing "atonic" uterus.

able manner, fetal heart tones, fetal movements or earlier still, fetal bones.

In 1924, Heuser published a paper on the diagnosis in the first months of pregnancy with the X-ray. He took great pains to rid the large bowel of fecal mat-



Figure 2. (Case 13)
Early pregnancy showing retention of the lipiodol, a filling defect posterior and to the right. Both tubes are patent.

ter and gas, using first a purge (10 grs. of calomel) and then belladonna and bone charcoal. Better pictures of the uterus could be obtained by inflating the bladder with air. To make the uterine cavity more visible he says you could inject therein 1, 2 or 5 c.c. of lipiodol. In subsequent publications he says that lipiodol injections are very useful in the early diagnosis of pregnancy and that with a proper technic they are harmless.

Before adopting a procedure that is seemingly so radical one naturally would want to know (1) what effect lipiodol has

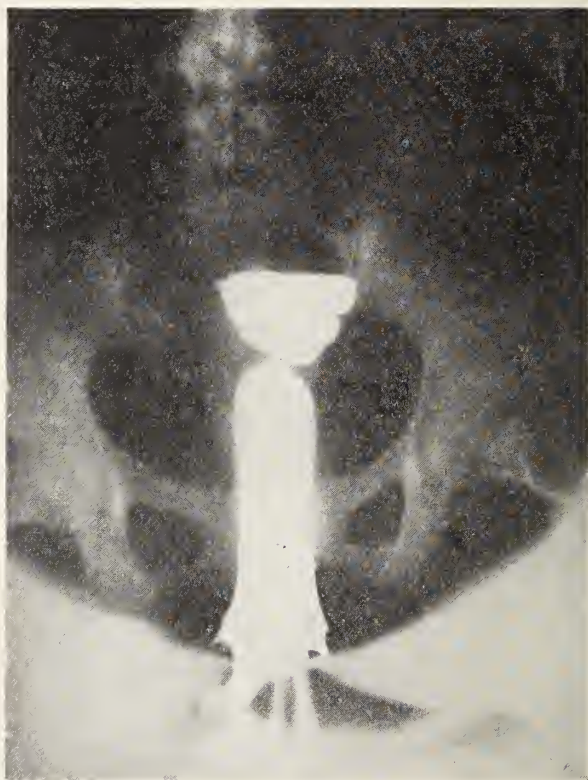


Figure 3. (Case 3)
Early pregnancy showing "atonic" uterus, filling defect on left side and closure of left tube.

upon the female genital tract, (2) the ill effects, if any, from its use in other gynecological conditions, (3) the risk of upsetting pregnancy, (4) effect, if any, on the child.

Since 1912 a number of radio-opaque substances have been used in the uterus. Douay gives an interesting account of this. In that year, Le Lorier made intra-uterine injections of electrargol in order to determine the patency of the tubes. He presented his work at the Congress at Lille in 1913, but did not publish it. The first attempt to use the X-ray in connection with the injection of radio-opaque fluid was done in Pozzi's clinic by Dimier. He used collargol and after the death of a patient

from peritonitis the work was abandoned at Pozzi's advice. This work, written in collaboration with Dartiques before the war, did not appear in print until 1916. The first published radiographs of the uterus and tubes were made by Cary in 1914. These were also made with collargol. The following year Rubin published his first radiographical researches upon the uterus and tubes. In his first work he used collargol, but later abandoned this for citrate of thorium or bromide of sodium. In 1923, Kennedy re-

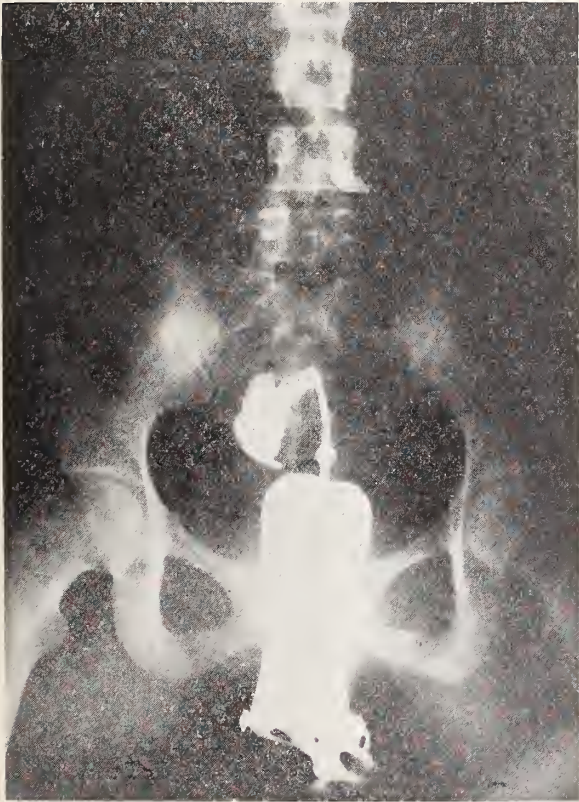


Figure 4. (Case 1)

Early pregnancy showing a markedly anteфлекted uterus, "atony" and filling defect. The left tube is visualized.

peated Cary's and Rubin's work, using in his cases 20 per cent sodium bromide solution. In the meantime in 1921, Heuser in Buenos Aires had begun his work with lipiodol injections which he first reported in 1924. In 1925 he demonstrated his hystero-salpingograms and his technic in Paris. Following this, there appeared a series of beautiful publications by Mocquot, Gregoire, Beclere and Darbois, Cotte and Bertrand and others. In Germany, Schober utilized the method of Kennedy in 1925 and the following year Joachimovits employed, with good results, iodipin. In Russia, Serdukoff used a 25 per cent to 40 per cent sodium bromide solution. Recently, however, most gynecologists and



Figure 5. (Case 20)

Pregnancy in 3rd month showing large "atonic" uterus and an irregular filling defect on left side. Both tubes are closed.

roentgenologists are using some of the iodized oils as contrast material. Dyroff and Rubin used lipiodol in their work upon the physiology of the tubes. Many clinics are using hysterosalpingography in their study of sterility and quite a few are finding it useful in the diagnosis of various pelvic conditions. So that now there has collected quite a mass of material from which one can judge its dangers in the non-pregnant woman. Gauss thinks it is not without danger of lightening up an old inflammatory process, while Carreras



Figure 6. (Case 6)

Pregnancy in 3rd month, showing large "atonic" uterus and filling defect on left side.

and his co-workers find lipiodol injections very valuable in the diagnosis of inflammation in and around the adnexia. Haselhorst had two inflammatory reactions to follow the use of iodipin. Odenthal, in 15 cases of sterility studied with radio-opaque fluids, had 2 cases of inflammation. One followed the use of "contrastol" and the other of "iodipin." Hellmuth reports



Figure 7. (Case 15)

Pregnancy in 3rd month. The ovum more nearly fills the cavity.

a fatal case of peritonitis that followed the injection of 3 c.c. of "umbrenal." Henkel says that he used to have trouble with collargol and "umbrenal", but that he has never seen any inflammation follow the use of iodipin, even when he operated upon the patient the day after the injection. Some of Forsdike's cases bled from the uterus shortly after the injection of lipiodol. Heuser has seen no signs of inflammation in the hundreds of cases of lipiodol injections in his clinic. Steinharter and Brown, Randall, Newell, McCready and Ryan in this country have had no untoward results from lipiodol or iodipin. Rubin says that in a few cases lipiodol was found in the tubes several months after the injection, but no symptoms referable to its presence were found. McCready and Ryan found lipiodol in the peritoneal cavity as long as 9 weeks after its instillation.

Not only has there been no report of lipiodol causing inflammation after its instillation into the uterus and tubes, but

Greene and Pandergrass report an actual improvement in 3 or 4 of their patients with chronic salpingitis. Heuser is said (Proust and Beclere) to have seen closed tubes open up in four cases after repeated injections of lipiodol, and we ourselves have had one such case.

A number of observers have studied the direct effect of lipiodol upon the tissues, especially the tubes and the peritoneum. Proust and Beclere state that if the tubes are open, there is no sign of the lipiodol after 24 hours. If the tubes are closed there is histological evidence of absorption, but no inflammatory reaction. Cotte and Martin also found that lipiodol disappears without leaving a trace when the tubes are open. From closed tubes it is taken up by macrophages without signs of inflammation.

Jaroscha says that with a good technic the danger of infection is slight, but there is a greater danger of carrying metastasis of uterine desidua or growths into the peritoneal cavity. He has, however, seen



Figure 8. (Case 16)

Pregnancy in 3rd month. The ovum fills all but a narrow strip on right side of the uterus.

no such case. The possibility of an embolus is to be thought of especially since oil can be forced into the veins of an extirpated uterus. It requires, however, 300 m.m. of Hg. pressure which is higher than is ever used clinically. The danger of rupture of the tubes is only to be considered when undue pressure is used for the injection.

While it is the general opinion that the injection of lipiodol into the uterus and tubes of the non-pregnant woman is safe, when it comes to injecting the pregnant uterus there is quite a different opinion. Siredey, in discussing Proust and Beclere's paper on the use of lipiodol in the diagnosis of uterine hemorrhages, says it is not to be thought of if there is a suspicion of pregnancy. Beclere agreed to this, and similar statements are made by Temesvary and Leiser. Dyroff says that the suspicion of pregnancy is perhaps a contra-indication to the injection of iodized oil (he prefers "contrastol") into the uterus for diagnostic purposes. In three cases in which he wished to interrupt pregnancy he tried this diagnostic method. These cases went eight, ten and twenty-one days without signs of aborting. He says if wider experience proves the innocuousness of this procedure the diagnosis of pregnancy should be possible as soon as there is an "ausbuckelung" of the desidua. Heuser

Proust and Becleres' paper, states that Juan Vanrell of Barcelona told him that he had made lipiodol injections in two cases of pregnancy and in one an abortion followed. Haselhorst reports obtaining a typical picture of pregnancy with iodipin in a 22-year-old III gravida epileptic. Both tubes were patent. Following the injection there was high fever and pain in the lower part of the abdomen. The patient aborted on the fifth day. Jungmann reports that in a 6 months uterine pregnancy the injection of 7 c.c. of iodipin



Figure 9. (Case 16)

A better view of the filling defect obtained in the Sim's position.

says that he and his colleagues in Buenos Aires have never caused an abortion in this manner. In fact, he and Dr. Uslenghi and Dr. Martinez have tried to produce abortions in tuberculous patients by this method, but have been unsuccessful. Beclere in closing the discussion upon



Figure 10. (Case 19)

Threatened abortion. Note wide distribution of the lipiodol. Its flocculent appearance is due to presence of blood.

established the diagnosis. Abortion in this case was produced by a bougie. Steinharter and Brown show a picture of an early pregnancy, but there is nothing said about the outcome of the case. Quite recently they have reported a case of early pregnancy in a bicornate uterus. This patient went to term and had an uneventful puerperium. Arnstam and Reinberg report three cases of pregnancy in which lipiodol was used in the diagnosis. There was no influence upon the pregnancy. Schneider and Eisler used this method of diagnosis in four cases of pregnancy in the second and third months, none of which aborted spontaneously. A fifth case, that of a bicornate uterus in which they were able to show the difference of response of the two horns to pituitary extract, aborted. Ott's eight cases were aborted artificially on the eighth day after the injection of iodipin. Unfortunately, the number of cases Heuser has had is not stated and therefore we cannot reduce the abortion-risk to figures.

RADIOGRAPHIC TECHNIC

Patient is given morphin gr. 1/6 and hyoscin gr. 1/200 and is prepared as for

delivery. (Shaved, soap and water scrub up, bichloride, mercurochrome 2 per cent in the vagina.) She is placed on a Bucky diaphragm in the most advantageous position, depending on the position of the uterus. The cervix is exposed with a bivalve or Sim's speculum and a cannula is introduced under the guidance of the eye. Lipiodol is slowly and gently injected with a Luer syringe until resistance is felt or the patient complains of cramps. The technic is 30 milli-amperes, 5 inch spark gap, with variation of time according to the thickness of the patient. Exposures are made in at least three different positions, antero-posteriorly or postero-anteriorly, Sim's position, or the ventral Trendelenburg's position. The first exposure is made after the solution has had time to pass out into the tubes. The second exposure is made immediately afterwards, usually in the Sim's position. A third one is made from five to ten minutes after patient has been allowed to sit in the erect posture.

REPORT OF CASES

Case 1—M. L. (colored) age 21, O-para, referred by the T. B. clinic. The patient had "gone over" a period three weeks. Vag. exam. showed a soft anteflexed uterus. Hysterosalpingography showed an enlarged cavity with a filling defect. Curettage the next day under sacral analgesia confirmed the X-ray diagnosis of pregnancy.

Case 2—M. J. (colored) 55, multipara, admitted to St. Philip Hospital in convulsions with no history. There was an abdominal mass that extended nearly to the navel. Patient was treated for eclampsia. After she recovered from her coma and we learned her age, we attempted to find out an explanation for the size of her uterus. H. S. was done, but we did not have enough oil to fill the uterus and got a wrong impression, thinking there was a filling defect. Exploration showed a large empty uterine cavity. Diagnosis of subinvolution with fibroids.

Case 3—Mrs. W. L. C., age 24, I-para, (reported in Johnston Willis Bulletin). This patient had a severe pre-eclamptic toxemia in July, 1926, from which she had not fully recovered. Her last menses began March 26, 1927. H. S. on May 6th (13 days after she missed her period) showed an enlarged globular cavity with a filling defect on the left side. Curettement on May 7th under sacral analgesia. Ovum found at situation indicated by the filling defect.

Case 4—Mrs. W. L. B., age 22, II-para. The youngest child was born February 19, 1927. Menses reappeared April 31, 1927 and lasted 5 days. She had not menstruated since. H. S. on July 12, 1927 showed a triangular uterine cavity of normal size. Both tubes were open. Subsequent history confirmed our diagnosis of "not-pregnant."

Case 5—Mrs. A. W. G., age 30, I-para. Spontaneous abortion in 1922. Premature spontaneous delivery in 1926. Patient left her husband in March, 1927. She missed her next period. Patient took a dose of castor oil and had a little bleeding. In May a doctor in Louisiana gave her a dose of ergot after which she passed two clots

without pain. Amenorrhoea until July 14 followed by bleeding for 28 days. Vag. exam. showed an anteflexed, soft, globular uterus that was a little enlarged. H. S. on August 15, 1927 showed an enlarged globular cavity with a small filling defect near ostium of left tube. Both tubes were patent. Uterus did not empty. On exploring the uterus under sacral analgesia, an old leathery placenta was found.

Case 6—Miss M., age 22, O-para, menstruated for 1 day on June 17, 1927. There was a soft, globular uterus about the size of a 3½ months' pregnancy. H. S. on August 18, 1927 showed an enlarged cavity with a filling defect on left side. Neither tubes is visualized. Uterus did not empty quickly. A diagnosis of pregnancy was made. On her own responsibility patient took castor oil and quinine and 50 mile automobile ride over rough roads. Patient became morose, refused to eat and threatened suicide. Finally, after several consultations she was aborted.

Case 7—Mrs. W. C. G., age 26, I-para. Patient developed suspicious signs of tuberculosis in her former pregnancy. She was delivered February 10, 1927. Her last menses began August 27, 1927. On September 30th vaginal examination showed a soft, anteflexed uterus. H. S. October 1, 1927, showed a triangular, slightly enlarged cavity, with no filling defect. Left tube was patent. Right tube was not visualized. Uterine cavity emptied well. Patient menstruated the next week and has menstruated regularly since.

Case 8—E. L., age 12. Patient was the victim of attempted rape several months ago, and since then there has been some question as to her conduct. Patient was brought for examination by probation officer. Vagina was reddened. Uterus was soft and could not be satisfactorily outlined. H. S. (December 16, 1927) showed an infantile uterus with patent tubes. The uterus emptied completely in a few minutes.

Case 9—Mrs. L. C. T., age 46, I-para. Menstruated last, December 16th. On January 23, she had a small anteflexed uterus, but nevertheless was confident she was pregnant. H. S. January 25, 1928 showed a triangular cavity that emptied quickly. No filling defect. Both tubes were outlined.

Case 10—Miss I., age 29, O-para. She had scanty December and January periods and feared she was pregnant. The uterus was enlarged and nodular. H. S. on February 9, 1928 showed a rather large triangular cavity with patent tubes. No filling defect. After the patient sat up for ¼ hour the cavity still contained lipiodol. Subsequent course confirmed our diagnosis of not pregnant.

Case 11—Mrs. D. G., age 24, O-para, believed she was 3 months' pregnant but had an abdominal tumor that corresponded to a 6 months' pregnancy. Diagnoses of multiple pregnancy or hydadydiform mole were considered. H. S. showed a single fetal skeleton lying just above the egg-like mass of lipiodol. The uterus failed to empty after the patient sat up.

Case 12—Mrs. R. C., age 40, O-para. Patient menstruated a little irregularly in January and February and was confident that she was pregnant. H. S. March 12th showed a small, triangular cavity. Right tube was not visualized. Uterus emptied readily. Pseudocyesis.

Case 13—Mrs. W. J. B., age 34, III-para. Last menses began February 9. On March 10th blood pressure was 155/110, a little jaundiced. H. S.

March 12, 1928, showed an enlarged, rounded uterine cavity that did not empty when patient was in the erect posture. There was a filling defect on the posterior wall. Both tubes were visualized. Patient took castor oil March 13th and the following day had some bleeding. After a week's time patient gave up hope of aborting at home and returned to the hospital for a curettement which was done under sacral analgesia. The ovum was found at the place indicated by the filling defect.

Case 14—Mrs. W. W. W., age 31, IV-para. Her last menses began March 1, 1928. Examination on April 5th showed a large, soft, retroverted uterus. H. S. showed a triangular cavity that emptied partially. Both tubes were open. Subsequent history supported our diagnosis of "not pregnant," the patient menstruating normally April 14.

Case 15—Mrs. L. G. M., age 32, I-para, gives a history of having been ill with phlebitis for 3 months after a Caesarian section. Last menses began February 17, 1928. H. S. on April 11, 1928 showed an enlarged horse-shoe cavity. Neither tube was visualized. Uterus did not empty.

Case 16—Mrs. T. E. D., age 30, IV-para. Last menses began February 1st. On February 15th she began to have cramps and a leucorrhoeal discharge. The discharge became blood tinged. On February 29th she began to have severe cramps and more bloody discharge. For the past week she has had a brown discharge. Vag. exam. on April 11 showed a soft retroverted uterus. H. S., the same day showed an enlarged cavity with a steer-horned appearance. The left side of uterus was not outlined. Neither tube was visualized. Since then patient has taken two 1,500 mile railroad journeys and has had cramps and bleeding, but is still pregnant.

Case 17—Mrs. J. P. C., age 28, V-para. Her last confinement was July 29, 1926. She has not menstruated since. This week her doctor found an abdominal mass. She has had several opinions as to the nature of the mass. H. S. April 17, 1928 showed outline of fetal spine overlying an irregular mass of iodized oil. Uterus did not empty when patient sat up. At the present time the pregnancy is uninterrupted.

Case 18—Mrs. J. R. J., age 20, I-para. Patient was confined December 5th and has not yet menstruated. She thinks she is pregnant. H. S. April 19, 1928 showed a triangular cavity with patent tubes. The uterus emptied completely. Diagnosis not pregnant.

Case 19—Mrs. L. A. R., age 32. Last menses began January 25. She was sent into the surgical department of Memorial Hospital on account of a bleeding tumor. H. S. April 20th showed a round "wind-blown" shadow with a central filling defect. Patient completed the abortion two days later.

Case 20—B. J., (colored). Referred by T. B. clinic because she has missed two periods. H. S. on April 23, 1928 showed a horse-shoe shaped cavity with a filling defect on left and post wall. Patient was curetted under sacral analgesia 5 days later.

Case 21—Mrs. S. A., age 19, I-para. She had menstruated only once, March 3-10, 1928, since her confinement. H. S. on April 26, 1928 showed a triangular cavity and patent tubes. The uterus empties readily.

Case 22—Mrs. H. B., age 22, I-para. Her last menses began February 28. Since March 30th she

has had abdominal cramps and uterine bleeding. The uterus was enlarged and tender. H. S. on April 27, 1928 showed a whorl-like shadow with a central filling defect. The tubes were not visualized. The cavity did not empty.

Case 23—Mrs. M., age 40, VI-para, referred by the T. B. clinic. H. S. on May 5, 1928 showed an enlarged, round shadow with a filling defect on the post wall. The left tube did not fill. The right tube showed a well marked sphincter. Curettage May 7th under sacral analgesia.

Case 24—Mrs. J. L. L., age 23, II-para. Her last baby was born December 17, 1927. Last menses began March 31. Vag. exam. on May 5th showed a soft, anteflexed uterus. H. S. on the same day showed an enlarged atonic uterus with a filling defect on superior border. Left tube did not fill.

DISCUSSION

This report is based upon the study of 24 cases, 13 of which were pregnant, 10 cases of suspected pregnancy, in which we were unable to make a negative diagnosis without hysterosalpingography, and 1 case of prolonged retained immature placenta. Three of the 13 cases were cases of threatened abortion, with abdominal pain and bleeding. The duration of pregnancy in the 13 cases varied from 5 weeks to 5 months. Five patients had missed only one period, 5 had missed two periods, 1 had missed three periods, and 2 were in their fifth month of pregnancy.

DIAGNOSIS

The diagnosis of pregnancy by hysterosalpingography depends upon (1) showing a relaxation of the uterine wall, (2) demonstration of the ovum, (3) closure of one tube, (4) failure of the uterus to expel the oil.

The relaxation of the uterine wall is shown by a rounded or globular uterine cavity. Its size, of course, depends upon the duration of pregnancy. This flaccid condition of the uterus is quite characteristic of pregnancy, but it does not differentiate an intra-uterine from an extra-uterine pregnancy. On the other hand, a sharp angular shadow is a positive sign that there is no uterine pregnancy. All of our pregnancy cases have shown a rounded contour of the uterine cavity.

The situation of the ovum is shown by a filling defect and when it occurs in a rounded uterine cavity it is quite characteristic of pregnancy. Submucous fibroids occur in angular uterine cavities. One of our extra-uterine pregnancies showed many irregular filling defects due to blood clots. The filling defect caused by a post-abort retained placenta is possibly the most confusing condition. Here one has the pregnancy-relaxation and the single

filling defect. However, the filling defect is much smaller than that which occurs in any save the very early pregnancies.

The closure of one tube occurs in most pregnancies and is a useful confirmatory sign. It does not, however, have the diagnostic value that the first two signs have. All of our cases of pregnancy except No. 13 showed at least one tube closed.

The retention of the lipiodol in the uterus after the patient has sat up for a while, occurred in all of our pregnant cases. It was usually absent in non-pregnant cases. Cases 5 and 10 retained the lipiodol well and case 14 partially. One of our sterility cases also retained the oil within the uterus for some time. With these exceptions it has been our experience that the non-pregnant uterus quickly rids itself of the oil. It is interesting to conjecture why the pregnant uterus should retain the oil. Proust and Beclere speak of a characteristic irritability of the uterus in a case of retained placenta. Heuser says that after filling the cavity with lipiodol one can with fluoroscopy, aided by a magnifying glass, see wave-like contractions that travel toward the neck if there be any foreign body (remnants of abortion, pregnancy or fibroma) present. It is conceivable that an irritable uterus might close upon and retain the oil, just as it sometimes does with the placenta, especially after the use of pituitrin. The occurrence of the retention in our sterility case, who was a very nervous person, would seem to favor such an explanation. Again it might be argued that the ovum interfered mechanically with the oil draining out. Case 11 would refute this, as all the oil formed a globular mass in the lower uterine segment below the fetus. A third possibility is that it is the very lack of irritability that allows the oil to remain in the uterine cavity. The atonic appearance of the uterine walls lends color to this idea. The fact that the patients do not abort speaks against an increased irritability. The recent work upon function of the corpus luteum shows that this body has an inhibitory effect upon the emptying power of the uterus. Case 10, and the case of sterility mentioned above, menstruated soon after the injection. In other words, the injection was made at the time of maximum activity of the corpus luteum. In case 14 the patient began to menstruate 9 days after the injection when the corpus luteum was beginning to be active. The pregnancy cases, of course, were under the influence of the

corpus luteum of pregnancy. It would seem, therefore, that the failure of the uterus to expel the iodized oil might be an indication of the presence of an active corpus luteum.

THE RISK OF PRODUCING AN ABORTION

Only three cases have been reported in which spontaneous abortion has followed the injection of iodized oil into the uterus. Vanrell is said to have had one such case. No details are given in this case. Haselhorst reports one case that, after the injection of iodipin, had a high fever and abdominal pain. This patient aborted on the fifth day. In the same paper he reports bilateral salpingitis in a 22-year-old maiden after the same technic. It is hard not to have the feeling that infection was the cause of the abortion and not the iodized oil. Schneider and Eisler's case is interesting. Their patient had a pregnancy in one horn of a bicornate uterus. By injecting pituitary extract they were able to see on the fluoroscopic screen the non-pregnant horn contract and force the lipiodol out of the non-pregnant part into the pregnant horn. They feel that the oxytocic was possibly the cause of the abortion which followed.

In the present series of 13 cases spontaneous abortion occurred once, which is well over Williams' estimate of one spontaneous abortion to every 5 or 6 pregnancies. Two of our cases (cases 1 and 3) were curretted the day following the injection, and one case (case 23) the second day, and therefore were not given much opportunity to abort spontaneously. Three of the cases (cases 16, 19 and 22) were threatening to abort, at least, they had been bleeding and were having abdominal pains at the time of the hysterossalpingography. One of these (case 19) expelled the ovum two days later without febrile reaction. Most of the patients were anxious to abort and after the investigation energetically used various homely practices, purgatives, automobile trips, etc., in the hopes of accomplishing their desires. One of them (case 13), had a little vaginal bleeding after the injection, but this stopped, and she was aborted artificially a week later. Five (cases 15, 16, 17, 22 and 24) are still pregnant.

EFFECT UPON THE CHILD

There has been only one case reported that has gone to term, that of Steinharter and Brown's. This child was apparently normal in every way. The other cases re-

ported of hysterosalpingography in pregnancy, all had therapeutic abortions. None of our cases in which pregnancy was not artificially interrupted have had sufficient time to go to term.

CONCLUSION

1. Hysterosalpingography offers a means of making an early diagnosis of pregnancy, especially valuable in such cases as tuberculosis in which a therapeutic abortion is indicated.

2. The risk of its producing abortion requires further investigation. From our experience this risk does not appear to be great.

3. It is a method of considerable value in making a negative diagnosis.

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OBSERVATIONS OF URETERAL
CALCULI

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The object of this preliminary study is to obtain some data as to the proper management of patients with ureteral calculi, and especially as to the efficacy of cystoscopic manipulation. The analysis is based on the material obtained from sixty-two consecutive cases admitted as in-patients to the Harper hospital. They represent only two-tenths of one per cent of the total admissions. The true morbidity, we believe, is considerably higher, since comparatively few patients with this disease are hospitalized.

The group presented several interesting clinical characteristics which may be summarized as follows:

Sex: The disease was twice as frequent in the male as in the female, occurring in 40 males and 22 females.

Age: The accompanying graphic chart is self-explanatory. No patients were under 20 years of age and only one was over 60.

PREVIOUS HISTORY

In our series, 23 (39 per cent) had had previous abdominal operations. Another striking fact was that 10 patients had previously had appendectomy performed, and in 8 of these, the calculus was in the *right* ureter. One patient had a severe colic during post-operative convalescence. This emphasizes very strongly the importance of excluding ureteral calculus before oper-

ating for chronic appendicitis. Given a patient with a ureteral calculus, we feel that the chances are more than even that the calculus will be missed and a diagnosis of some intra-abdominal condition will be made.

X-RAYS

There were 49 positive and 13 negative X-rays. With a negative X-ray, a diagnosis was accepted as positive only when the patient subsequently passed a stone, or when the clinical history with the laboratory findings were so definite as to exclude any other diagnosis. With these rigid qualifications it is probably that several cases were excluded from consideration which in reality had a ureteral calculus, and consequently the estimate of 21 per cent with a negative X-ray may be too low. It may be pointed out that the average above presented (21 per cent) is also the average that obtains in the literature.

LABORATORY FINDINGS

Red blood cells were present in 39 cases (63 per cent). They were definitely absent in 12 (20 per cent). In 8 cases the presence or absence was not noted. We feel that the presence or absence of blood cells is a very important diagnostic feature, and the actual percentage is probably nearer 75 than 62.

LOCATION OF STONES

This was determined from a study of the 49 cases in which the X-ray was positive. The findings are shown in the following table:

Right Utero Pelvic Junction.....	1	L. U. P. J.	3
Right Upper Segment	3	L. U. S.	5
Right Lower Segment	1	L. L. S.	1
Right Utero Vesical Junction.....	18	L. U. V. J.	17
	23		26

Figure 2.

TREATMENT

One of the following procedures was adopted when a patient entered the hospital:

1. A diagnosis was established, and the patient was discharged without further treatment.
 2. After the diagnosis was made, cystoscopic manipulation, consisting of dilatation of the ureter, and attempts to dislodge the stone with the various instruments especially constructed for this purpose, was carried out.
 3. An open operation removed the offending calculus.
- In each instance the history was exam-

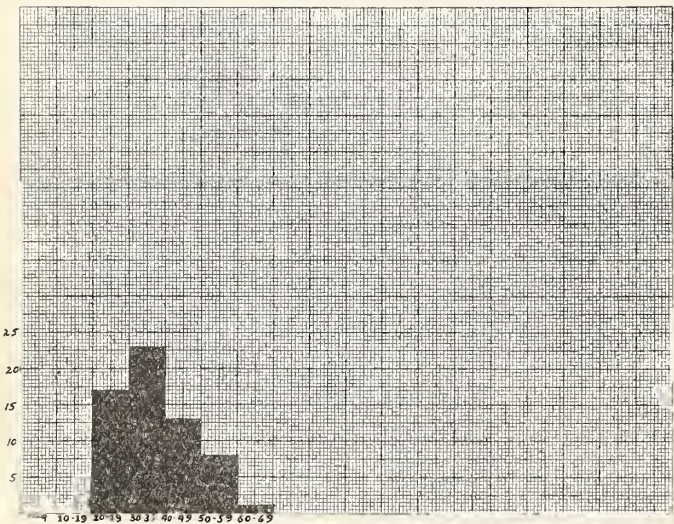


Figure 1.

Key—Abscissa—Age by decades—Ordinates—No. of cases.

ined relative to the duration of the disease and the number of the attacks. The X-ray plate was examined to determine the actual size of the stone and its shape, particular notice being taken of its regularity or irregularity. Finally, the subsequent history of the patient was investigated to determine whether a stone was passed.

In estimating the size of the calculi, we realize that the X-ray shadow does not reveal the exact size of the stone. A stone of a certain size will cause a somewhat larger shadow in an obese individual than the same stone would in a thin individual. At the same time these variations are not sufficient to prevent us from obtaining some idea as to the relative size of the stone from measurement of the shadow on the X-ray plate.

These findings are best expressed in the following table:

	No.	Size	Shape Irreg.	Duration	Attacks	Passed	%
No Manipulation	20	0.4 cm.	12%	11 days	3	13	65
Manipulation	36	0.6 cm.	33%	96 days	5	27	75
Operation	9	1.1 cm.	50%	600 days	8	.....	.....

Figure 3

It is obvious that patients, in whom cystoscopic manipulation was carried out, were a more complicated group than those in whom no manipulative procedure was done. The average size of the stones was six-tenths of a centimeter in the former, as compared with four-tenths of a centimeter in the latter group. Thirty-three per cent were irregular in the former, as compared with 12 per cent in the latter. In addition the average duration of symptoms was over 8 times as long with a slightly greater number of attacks. In spite of this, an even greater number (75 per cent) passed a calculus after manipulation than did so without manipulation (65 per cent). Our impression is, that if a stone is under seven-tenths of a centimeter, it will probably pass of its own accord or with cystoscopic manipulation; whereas, if it is over this size, it probably will not. Also if the attacks are frequent and severe, the possibilities of spontaneous passage are enormously increased.

The open operation was performed in nine cases. This is approximately 15 per cent of the total cases, a figure considerably below the ones quoted from various clinics. We feel that our figure (15 per cent operated on) is a conservative one. It is true that the average duration of symptoms is only two years; on the other

hand, if two cases are excluded in which the duration was very short and the stones small, the general average of the remaining case is enormously increased.

SUMMARY

1. Cystoscopic manipulation is an effective form of treatment in the vast majority of calculi of the ureter.
2. Calculi, as recorded on the X-ray plate, three quarters of a centimeter and under, should be treated conservatively, (i. e., without operation).
3. Calculi larger than one centimeter in diameter—especially if irregular—will probably require open operation.
4. Calculi are most likely to pass if many ureteral colics occur at relatively short intervals. Conversely, patients having relatively few colics and a long duration of symptoms should have an open operation at an early date.

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INFLUENCE OF ROENTGENOLOGY ON THE PRACTICE OF SURGERY*

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Were I so ungracious as to criticize the committee who have honored me with the invitation to review the debt of surgery to radiology, I would suggest that the choice of speaker should have fallen upon a surgeon who was actively engaged in surgical practice before the eventful day in December of 1895 which marked the birth of this new arm of medical science. To picture adequately the almost miraculous aid lent to surgical diagnosis and therapy by the fruit of Roentgen's discovery is a task which I can do scant justice. It is extremely difficult for us younger surgeons to realize the extent of the miracle. To quote Sir Berkeley Moynihan, "It requires a considerable effort of memory and some skill in reconstruction, to recall for ourselves the days when only the note given by a sound in the bladder as it impinged against a stone made cer-

* Presented before the Post-Graduate Conference held under the auspices of the Michigan State Medical Society, the Wayne County Medical Society and the Alumni Association of the Detroit College of Medicine and Surgery, May 14-17, 1928.

tain the diagnosis of calculus." And it was not a rare event in our student days to witness the disappointment of the surgeon on failing to find in the kidney the concretion so confidently expected in the light of the patient's symptoms. It was a matter of unforgettable pride when I first successfully radiographed the stone we had suspected in the renal pelvis of one of our guests. The rather adipose individual had been obliged to submit to a many-minute exposure, but by dividing it into fractions of fifteen seconds each, with a sufficient interval between efforts, the plate was at last sufficiently exposed and the diagnosis confirmed. And one of the most baffling surgical problems of those days was stone in the ureter until the x-ray permitted exact localization of the offending concretion.

As I say, it is nearly impossible for us of the present younger generation to realize the wonderful assistance rendered in the localization and extraction of foreign bodies—the first and most obvious help rendered by Roentgen's discovery; for even those surgeons still active who began their work before Roentgen's discovery have become so accustomed to our present luxuries that their memory of the distressing problems of the former days has been dimmed.

To help reconstruct the picture of surgical resources of a quarter of a century ago, let me quote from a popular surgical textbook of 1903 a summary of the value of the x-ray to the surgeon:

"The uses of the x-ray are legion. They are of the greatest possible value in the location of foreign bodies, especially bodies of metal, glass or bone; . . . to locate a Murphy button and tell us when it has loosened and descended. . . . A calculus in the kidney may exist and escape detection with the rays, because the kidney is very deeply placed, is under the ribs and close to the vertebral column. Occasionally a drainage tube lost in the pleural sac may be discovered. Most observers state that gallstones cannot be skiagraphed in the living body. The rays may fail to disclose a foreign body because of its being overshadowed by a bone, but prolonged exposure or taking of another picture with the part in another position may bring it into view. In many cases a skiagraph does not indicate how deeply in the tissues a foreign body lies, or upon which side of a bone it is lodged. . . . In detecting fractures and dislocations the Roentgen rays are of great value, especially when there is

much swelling, when there is little displacement, and when the fracture is in or about a joint. . . . Fractures of the spine *can* be skiagraphed, but never show very clearly. To take a picture of a fractured rib, first limit the motion of the chest by bandaging. The x-rays may be of value in enabling the surgeon to recognize rheumatoid arthritis; bone and joint tuberculosis. . . .; the amount of acetabular rim present in congenital dislocation of the hip joint; the state of the bone in a crushed limb; bone deformity; osseous tumors; bone displacement; osteomyelitis; caries; necrosis; and osteosarcoma. . . . The position of the fetus in utero can be definitely made out.

"Applied to the soft parts, the new process has obtained interesting but not as yet many practically useful results. . . . The shadow of the heart can be made out, and the outlines of the diaphragm, kidney and liver can be thrown upon the screen. If the stomach is distended with gas, it shows as a light area upon a dark background. If food is eaten after being mixed with subnitrate of bismuth, the outline of the viscus becomes fairly distinct. Thickened pleura, pleural effusion, pulmonary consolidation, abscess of the lung, pericardial effusion, aortic aneurysm; cavities in the lungs, and atheromatous blood vessels may be made out with more or less distinctness. If a sinus is injected with iodoform emulsion, a picture of it can be taken."

Thus, briefly, the scope of x-ray examination included those lesions characterized by the presence of an opaque foreign body or some injury to a bony structure; and even in these cases the value of the new process was not always sufficient to warrant reliance upon the method.

Twenty-five years ago the applications of radiology except in the hands of a very few radiologists, were almost exclusively in the domain of surgery; internal medicine had not yet begun seriously to take advantage of the developments of diagnostic radiology, in which, especially in the field of heart and lung diseases, our colleagues on the program of today, Varney, Crane and Hickey, were privileged to be pioneers. Dr. Crane has been too modest to tell you that his paper on "Skiagraphy of the Chest" not only was one of the very earliest comprehensive publications on the subject, but constituted a classic concerning which even today, with all the developments of a quarter of a century of inten-

sive study, very few criticisms can be made.

The gastro-intestinal tract was, in this twelve hundred page surgical text-book of 1903, dismissed with thirty-six words relating to the fact that the outlines of the stomach could be demonstrated after gaseous distention or the administration of some bismuth subnitrates. What a wonderful achievement in medicine and surgery has been the unfolding of the possibilities of radiological diagnosis in the last two and a half decades!

As to foreign bodies, one has only to consider the Great War with its millions of foreign body localizations and extractions by methods so numerous that more than two hundred localizing procedures were published during the first three years of the conflict, to realize what a boon to mankind has been this earliest application of the Roentgen rays. And to the list of opaque foreign bodies formerly discoverable have been added a number of non-opaque invaders of the human organism, such as non-opaque concretions in the alimentary tract, such as trich- and phyto-bezoar, stercoliths, cholesterolin gallstones, pure uric acid urinary stones, soft concretions in the appendix, and even some of the larger intestinal worms.

In fractures and dislocations, not only is it almost malpractice to attempt a complete diagnosis without the radiogram, but in therapy its use is indispensable in checking the correctness of the replacement. No modern surgical institution for the treatment of bone and joint injuries can be called complete which does not include provision for fluoroscopic control during the surgical manipulations, and frequent check at the bedside by portable apparatus.

In the field of gastroenterology and urology, the unfolding of diagnostic radiological possibilities has taken place mainly through the placing of opaque media within the viscera under study. In this development several important eras may be noted. The first one, beginning as far back as 1897 with the work of Cannon and Williams, was characterized by the introduction of the opaque meal in gastrointestinal diagnostics, although six years later general appreciation of the wonderful potency of this means in gastrointestinal diagnosis had advanced so little that thirty-six words sufficed to describe its value in a surgical text-book of more than half a million words.

In 1908, Voelcker and Lichtenberg pro-

posed the use of a 10 per cent solution of collargol for pyelographic work, thus marking the commencement of what may be termed the second great era in radiological diagnostics, with such great and rapid extension of the field that large text-books have been devoted to the one subject of the radiology of urology, notably the book by Braasch and the one by Young and Waters now in press.

The third era may be considered as that opened up by the publications in 1924 of Evarts Graham and his associates on visualization of the gallbladder by the administration of halogen compounds. From the twelve-word statement of 1903 that "most observers state that gallstones cannot be skiagraphed in the living body," we now have an eight-hundred-page book on the gallbladder with special reference to the applications of cholecystography. Instead of frank inability to skiagraph gallstones in the human body we now find striking radiographic evidence of the presence of stones or of gross and serious gallbladder disease in 95 per cent of cases of cholelithiasis. And by way of excluding cholelithiasis, I have found that a statement, based upon careful cholecystographic study after intravenous injection, that gallstones cannot be found or that the gallbladder shadow is present, even though faintly, without filling defects due to stones, is worth 95 per cent toward ruling them out.

Another epoch in radiological diagnosis was dependent upon the fact that air or gas is easily discerned with the Roentgen ray. At first, one used the air or gas naturally present, thus studying the trachea and the lungs, gas abscess and gangrene, gas or air collections in the larger body cavities, as the sinuses, spontaneous pneumoabdomen; but soon advantage was taken of the introduction of air or gas to produce artificial pneumothorax, artificial pneumoperitoneum, ventriculography, encephalography and myelography, and even occasionally the injection of air or gas into articulations, especially the knee joint, to demonstrate otherwise invisible lesions, such as loose cartilages. Certain dangers attend the latter procedure and it is nowadays seldom resorted to. The detection of spontaneous gas collections has led to some of the most spectacular triumphs in radiology, such as the diagnosis of subphrenic gas abscess, intra- and subhepatic abscess, pancreatic abscess, chronic ileus, post-operative ileus, gas bacillus infection in traumatic wounds, and the rec-

ognition of perforation of abdominal viscera by detecting a small intra-peritoneal collection of gas.

Still another phase of radiological diagnosis was initiated by the introduction of iodoform, and later bismuth paste for the visualization of sinuses and fistulae. From the relatively limited uses of the earlier opaque pastes grew the present extensive employment of iodized oil in pulmonary, gynecologic and neurologic diagnosis, permitting complete opaque visualization of the bronchial tree and the detection of bronchiectatic cavities, lung abscess, bronchopleural fistulae, pulmonary and pleural tumors; improved accuracy of gynecologic diagnosis, especially differential diagnosis; and in neurology the exact localization of spinal cord tumors, and their differentiation from meningitic processes. Iodized oil instillations have also served a useful purpose in extending the field of rhinological diagnosis, especially in the identification of thickened membranes, polypi and other tumors of the nasal accessory sinuses.

To me, the most interesting chapter in the story of the development of the diagnostic use of the x-rays has related to the digestive tract. I am not one of the veterans of radiology like Dr. Varney, Dr. Crane and Dr. Hickey, who are charter members, so to speak, yet it has been my privilege to have participated in the development of digestive tract roentgenology almost from its incipency. In 1904 I spent considerable time in our primitive x-ray room, with a static machine repeating the classical experiments of Cannon on cats. At that time, I first used the opaque meal of bread and milk with bismuth subnitrate. In spite of generous feedings, I soon lost the friendship of the first feline participant in my experimental work. She was tied, back down, in a photographic plate drying rack during the fluoroscopic observations. On one occasion she let her tail drop through the groove in the bottom of the rack to come in contact with the high tension current, with somewhat startling effects.

From those humble beginnings we have participated in the unfolding of one of the modern miracles. It is now possible to differentiate successfully between diverticulum of the pharynx and esophagus, esophageal malignant disease and cardiospasm. Without the assistance of radiology, it was formerly only very rarely and with greatest difficulty that hernia of the diaphragm was recognized, whereas

today, hernia and eventration are differentiated, and it has become almost a commonplace matter, thanks to x-ray guidance, to intubate the esophagus, the stomach and duodenum and even the small bowel.

In gastric disease, Dr. Richard Cabot has declared that the roentgen findings are worth more than all the other laboratory diagnostic means combined. Moynihan declares "it is hardly too much to say that we owe almost everything" in the diagnosis of gastric disease to radiology; and he does not doubt that "more errors have been made in the diagnosis of gastric ulcer than of any other disorder. Its symptoms are mimicked with so much accuracy by other diseases that it is not only the unwary who are deceived. Radiology has put most of this right, and has explained the cause of the so remarkable plagiarism by those other diseases which arouse gastric symptoms." And, further, it has been not only diagnostic errors, but faulty therapeutics, which have been largely corrected through the aid rendered by x-ray studies and control. It is not too much to declare that in no case may a diagnosis of gastric ulcer be based upon clinical evidence alone. Radiological confirmation must be secured before one is warranted in proceeding with treatment, either medical or surgical.

And yet, there are dangerous pitfalls in the radiological diagnosis of gastric ulcer; small ulcers, especially when located on the posterior wall high up, offer the greatest difficulties. Differentiation must be made between congenital diverticula of the stomach which are prone to occur near the cardia and diverticula of the duodenum, especially those occurring near the duodenojejunal junction. Careful employment of some of the refinements of fluoroscopic palpation, taking advantage of our knowledge of the radiological appearance of the mucosal folds of the gastric lining, should help to avoid error even in these more difficult cases; so that the accuracy of the roentgen method is easily greater than that of any other diagnostic method in gastric ulcer. In duodenal ulcer this accuracy is still further enhanced. Both medicine and surgery owe much to the patient pioneer work of some of our American radiological colleagues.

Of course, we are constantly reminded of the frailty of human service by the radiological diagnostic failures which are usually heralded with much pomp and ceremony; but these are not so much er-

rors of the x-ray as of the x-ray worker, who through haste, or inexperience, or lack of appreciation of the clinical aspects of the disease he is endeavoring to investigate, errs in his application of the rays or his interpretation of their findings. And on the part of the surgeon there is too often a ready acceptance of the radiologist's findings, without sufficiently careful scrutiny of the latter's right to such implicit confidence on the part of his colleagues. It is a fact that the amazingly rapid development of digestive tract radiology and the naturally widespread desire on the part of physicians and surgeons to take advantage of its aid, have resulted in a situation where the demand for competent digestive tract radiologists far exceeds the supply; so that there are very many physicians endeavoring to specialize in radiology and report on the radiological findings in digestive tract examinations who are not yet sufficiently fitted by training or experience for that responsibility. They need the encouragement and collaboration of their colleagues to avoid the "lamentable examples of mischievous and meddlesome surgery practiced upon those who are erroneously arraigned as victims of digestive tract lesions in need of surgery."

The staff of this hospital with its wonderfully equipped and manned radiological department can hardly appreciate the importance of the foregoing statements, unless you recognize the truth of them in the pitiful and all too numerous examples brought to you in patients who have suffered needless, and tragically more than useless, surgical interventions on mistaken diagnoses. Hundreds of gastroenterostomies have had to be undone because the original diagnosis of duodenal ulcer or pyloric obstruction was erroneous. As a famous physician has said, there are two important facts to be recognized in connection with digestive tract diagnosis: all patients in whom an organic lesion is suspected should be sent to the x-ray department, as well as all patients about whom we have a doubt; and the radiologist should have plenty of time to work out his findings.

Some of the most spectacular phases of digestive tract radiology have concerned the recognition of diverticula of the intestine. Esophageal diverticula early fell to the radiologist's efforts, but duodenal, jejunoileal and colonic diverticula have only during the last fifteen years been a part of the radiologist's report. The

"mimicry of carcinoma" by colonic diverticulitis has resulted in our disillusionment concerning some of the reputed cures of carcinoma of the colon, operative or spontaneous. It is now recognized that even at the operating table, with his hands in the opened abdomen, the surgeon is often unable to distinguish between carcinoma and diverticulitis of the colon, whereas the radiologist, given a little time, will almost surely work out demonstrable proof of one or the other condition. There are some exceptions where the two lesions co-exist, and, in these, differentiation may be impossible without resection of the mass, a surgical task not always capable of performance. Truly miraculous has been the subsidence and final disappearance of a large sigmoidal tumor, so much feared as a malignant development, in not a few cases of colostomy for the relief of obstruction. Sigmoid diverticulitis has mimicked not only sigmoidal carcinoma, but also appendicitis, duodenal ulcer and gallbladder disease, as well as numerous pelvic affections, such as cystitis, acute tubo-ovarian disease, and pelvic peritonitis.

In the diagnosis of colonic carcinoma the radiologist must overcome many obstacles. Pitfalls are numerous: spasms, stercoliths, pedunculated benign growths, overlapping of intestinal loops hiding certain segments of the bowel, and the sometimes misleading appearances in connection with normal motor behavior of the colon. Yet the radiological findings, which, here as elsewhere, should be correlated with the clinical and other laboratory evidence, should permit a very high degree of accuracy of recognition of colonic malignant disease long before the development of obstruction or a palpable tumor.

Some years ago, in the earlier days of gastrointestinal radiology, yet long after the specialist should have become perfectly familiar with the possibilities of x-ray investigation in his field, was read a paper by a prominent internist on the early (*sic!*) diagnosis of cancer of the stomach, the principal points brought out by him relating to the finding of blood in the stool or vomitus; vomiting characteristic of pyloric obstruction, and the presence of a palpable tumor. One of our American leaders in radiology who was asked to discuss the paper remarked that instead of the early signs of gastric carcinoma, the speaker had been describing the symptoms of an impending postmortem. How thank-

ful we should be that we are delivered from the difficulties of those days!

Limitations to the usefulness of radiological help to the surgeon have been hinted at from time to time in the foregoing remarks. It should be recalled that after all, the radiological aid is but one, though a very important one, of the clinical resources available to the surgeon. Particularly in the field of negative findings should the radiologist's opinion not always be considered as authoritative. His failure to find positive signs of disease should not lead us to reject at once and *in toto* the evidence furnished by other approved methods. Particularly in disease of the gallbladder the surgeon must be willing to act upon the conviction arrived at by other means in many cases where the radiologist fails to furnish confirmation rather than be "lulled into contentment and a dangerous inactivity, only to be roused by a very formidable catastrophe." Again quoting Moynihan, "if the careful clinician has made a diagnosis of cholecystitis or cholelithiasis, a report from the radiologist that gives it no countenance should be disregarded. And so it is with suspected malignant conditions of the large intestine. Though a radiological examination often affords the greatest help when confirmed with the clinical history, and with the daily search for occult blood, the earliest and most certain diagnosis of these diseases, after all, is made when the barrier of the abdominal wall is lifted away."

Permit me to devote a few words to the value of the x-ray examination in the control of post-operative treatment and the recognition of post-operative complications. For this a bedside portable x-ray equipment is a necessity in every well equipped hospital. Subphrenic abscess, post-operative ileus, pulmonary complications, particularly the differentiation of subdiaphragmatic conditions from pleural and lung complications, the control of the position of drainage tubes, are among some of the less usually recognized opportunities for bedside x-ray study.

And in research there is a wonderful field still almost untouched, regarding the immediately post-operative conditions of gastrointestinal motor physiology. A few publications have appeared on the subject, but most of them relate to end results rather than to the conditions which obtain while the patient is passing through the first few days of the convalescent period.

As for therapy, I need not attempt to

add to Dr. Varney's remarks. X-ray treatment is rated as one of the recognized surgical means in the management of malignant disease, though with its limitations. The radiotherapy department constitutes a haven of last resort for many surgical derelicts. True, in the treatment of malignant disease, too often the radiologist has seen the patient only in the extremity of his tragical experience, and little can be done. Sometimes pain is relieved, the patient put back on his feet and restored to a comfortable degree of activity and often of usefulness for a period of months or years. In occasional cases a veritable miracle is the surprising result of radiotherapeutic applications. Truly astounding is the melting away of certain lymphatic tumors even when of large size. The disappearance of pain is often immediate and of long duration. And sometimes we see what may be truly considered as cures.

For instance, I have in mind the case of a woman sent to me about sixteen years ago, only a week after operation for removal of a part of a malignant goiter—just enough to take the pressure off the trachea. That patient is alive and well today, although seven years ago I operated on her again for radical removal of a scirrhus of the left breast. Both operations were followed by systematic and thorough application of radiotherapy, with the result that the patient is today free from any recognizable signs of malignant disease. The massive thyroid enlargement entirely disappeared within a year, and thyroid activity as measured by the estimation of the basal metabolic rate is within the normal limits. The diagnosis of both lesions was confirmed by several pathologists of international reputation.

I recall also a case of carcinoma of the anterior lip of the cervix, with an ugly, foul, necrosing, bleeding tumor, five or six centimeters in diameter, extending well onto the anterior wall of the bladder, treated seven years ago with a combination of cauterization and radiotherapy. Dr. Warthin was given biopsy specimens from time to time during the course of the treatment. His reports are extremely interesting, showing the gradual diminution in number of the malignant cells, with the progressive development of connective tissue encapsulation of the few remaining attenuated signs of cancerous disease. The patient, though now suffering from marked interference with the return circulation in one leg, a recent development,

has enjoyed nearly seven years of reprieve from a cancer death, years of splendid useful activity.

And in the field of benign lesions, there is a large opportunity for radiotherapy. In internal medicine there are the leukemias, except the acute; lymphogranulomatosis; the various types of adenitis; Banti's disease and certain other enlargements of the spleen; certain thyroid lesions; post-operative peptic ulcer; bronchial asthma; many forms of tuberculosis, including certain cases of pulmonary tuberculosis; perhaps pernicious anemia and polycythemia, though in the latter, drug treatment is supplanting the application of radiation therapy. I have also found the application of deep x-ray therapy useful in certain cases believed to be chronic pancreatitis, though I must say that several of these later proved to be pancreatic malignancy with its usual termination. In pediatrics, radiotherapy is useful for enlarged thymus and bronchial glands, abdominal and joint tuberculosis, whooping cough, and diphtheria carriers.

In surgery there is a large field of usefulness for radiotherapy in benign lesions: inflammations and suppurations, such as cellulitis, carbuncle, erysipelas, actinomycosis, parotid fistula, certain of the arthritides, bone and joint tuberculosis, tuberculous adenitis, peritoneal, intestinal and urogenital tuberculosis, keloids, and in some cases of prostatic hypertrophy.

Gynecological affections are in part amenable to radiotherapeutic management: many types of uterine fibroids, amenorrhea, oligomenorrhea, dysmenorrhea, metro- and menorrhagia, especially the excessive bleeding which so often occurs near the menopause. Many radiologists, especially in Europe, also recommend the employment of radiation in certain fields which I have not been able to accept, namely, to produce therapeutic abortion, in the treatment even of sterility, or, on the other hand, for the therapeutic production of sterility.

In the foregoing remarks, I have succeeded very imperfectly, I realize, in the task assigned me. The subject and the occasion deserve better treatment than I have been able to give it in the brief time allowed by my busy life. Surgery and surgeons are greatly beholden to radiology and radiologists. May they both remind themselves frequently that they are all primarily physicians, some "doomed to the practice of surgery," the others privileged to be pioneers in this still yet insufficiently

explored and developed field of radiology. Let both work in harmony, hand in hand, seeking in true scientific spirit in the name of humanity to advance the cause of medical science to which they have devoted themselves.

EFFECT OF PREVIOUS ADMINISTRATION OF ANTITOXIN AND TOXIN-ANTITOXIN ON SERUM REACTION

Previous injection of antitoxin serum seems not to affect future serum administration markedly, as almost as large a percentage of serum reactions occurred in patients not having received previous serum injections as in those so treated. Of the few patients seen by Sophie Spicer, New York (*Journal A. M. A.*, June 12, 1928), with marked serum reaction, none happened to have received antitoxin prior to the present illness, while those patients with a history of previous antitoxin, when exhibiting a serum reaction, had it in a mild or moderate form. Previous administration of toxin-antitoxin appears to have little or no effect on subsequent serum treatments. Only four of the twenty-eight patients in this series who gave a history of having been immunized against diphtheria with toxin-antitoxin had a serum reaction. This small series of cases seems to prove that toxin-antitoxin does not sensitize to future serum injections to such an extent as to produce any appreciable effect. The fact that these patients all had scarlet fever suggests the use of toxin-antitoxin, as persons once immunized against diphtheria with toxin-antitoxin are usually protected against that disease. The force of this is somewhat lessened by the fact that the patients with diphtheria were on the average younger than those having scarlet fever. The reason for the comparatively mild type of serum reactions may be the method of treatment.

NEW SERUM AIDS ALL TYPES OF PNEUMONIA

A new serum for treating pneumonia, developed by Dr. L. D. Felton of Harvard University, has given promising results in combatting this highly fatal disease. The serum marks an advance in that it can be used for all four of the recognized types of pneumonia, according to Dr. Russel L. Cecil of the Bellevue Hospital, who has obtained very efficacious results from its use in the pneumonia clinic of that hospital. It works best with types one and two, the two groups that comprise the majority of pneumonia cases. The recoveries after its use with type one have been very encouraging, indeed, Dr. Cecil declared, though the deadly type three which always has had a very high death rate has proved the least amenable of any group. Pneumonia serums used in the past have been specific for each type. Since certain laboratory procedures have to be followed out before the type from which the patient is suffering can be determined, precious time often has to be lost before the doctors know which serum to give. The Felton serum of mixed cultures can be administered on admission to the hospital and frequently a gain of many hours can be made in checking the course of the disease.—Science Service.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner*

THE YEAR'S WORK IN MOUTH HYGIENE

The activities carried on by the Bureau of Mouth Hygiene for the fiscal year ended June 30, 1928, are shown in the following extracts from the annual report of that bureau. Though mouth hygiene is a more or less recent addition to the field of public health, its importance is very generally recognized.

"The chief aim of a public health dental program is the removal and prevention of mouth infection. This can be accomplished only by education and correction.

"Budget allowance would not permit the consideration at present of corrective clinics financed in whole or in part through this bureau, even if there were a place for such work in a state health program. Consequently our endeavor is confined to education concerning the prevalence and evil effects of mouth infection and the promotion of preventive measures and correction.

"As the bureau is new and the personnel confined to the director and a part-time stenographer, it will be recognized that organization, preparation of material and field work must all be done by one individual. Economy, therefore, as well as good policy, compels us to work through existing agencies as much as possible both in the department and in the field. As our work is closely related to that of the Bureaus of Child Hygiene and Public Health Nursing, and Education, we have sought and had most cordial co-operation from these divisions. In the field, we have had our chief contacts through the various school and public health nurses, teachers, dentists, parent-teacher associations, etc.

FIELD WORK

"The director has not been able to fill all the requests for assistance in the field and has usually gone only where requests came from communities assuring cordial co-operation.

"Field work consists usually of a demonstration clinic, viz., a careful dental examination of one schoolroom in a locality with health workers, school officials and other leaders present; speaking before schools,

parent-teacher associations and other organizations; and conferences with dentists, teachers, nurses, and other health workers. In several places a lecture and demonstration was also given before county normals, and upon cordial request at the Michigan State Normal College at Ypsilanti. This gave an opportunity to reach a very important group—the prospective teacher.

"This program has been so much appreciated and the results so gratifying that we believe it presents the largest opportunity for constructive and far reaching accomplishments. Reports received during June, 1928, from about fifty public health nurses in the field during our suggested program and material in school work, shows that Marquette leads in the Upper Peninsula with 34 rooms using the dental honor roll. Of these, 17 had all corrections completed and 14 showed marked improvement. In the Lower Peninsula, Port Huron leads with 67 school-rooms using the honor rolls. Fifty-two rooms had all corrections completed and all rooms showed marked improvement.

"The value of a clinic and reward is evidenced by the fact that both Port Huron and Marquette have a part-time school dentist, and in each the school board granted a half holiday to rooms having all corrections completed. This time is more than made up in improved attendance and scholarship because of better health after corrections are made.

"School authorities, physicians, and dentists who have not examined the mouths of school children have little conception of the appalling amount of mouth infection found there. The same is true of other groups beside school children, and there can be no question as to the desirability of reaching prenatal, preschool, industrial, and institutional groups in a dental health program. We are attempting to do something in these directions, but with our limited resources we are convinced that we will accomplish more by concentrating as much as possible on the school program at present.

"At the request of local dentists and leaders in the community, special attention

has been given Berrien County, where the field seemed ripe for a county dental program. This has resulted in the employment of a full-time school dentist for the past fifteen months whom we started in the field and who is doing an excellent piece of work that is receiving very favorable comment in the county. We believe that this is going to be an example of what co-operation upon a good dental program can accomplish.

"Berrien reports for the past year 12 schoolrooms with dental corrections completed in Benton Harbor, five in Niles, two in Berrien Springs, two in Coloma, and one in Three Oaks.

"We cannot pass over mentioning also the splendid co-operation which we are receiving from the Michigan State Dental Society. The Society is backing our program in a generous, whole-hearted, and material fashion which means much for the success of the work.

TABULATED REPORT

Number of places visited	125
Addresses given	137
(Adults 72, school 40, professional societies 25)	
Conferences outside office	145
Demonstration clinics	89
Number examined	3,382
Pamphlets distributed	208,029
Requests for pamphlets	1,505
School blanks distributed	57,872
Requests for school blanks	218

"A digest of school examinations that we have made in various parts of Michigan shows something of the situation in mouth hygiene. This digest follows:

DIGEST OF SCHOOL EXAMINATIONS

Group	No. examined	Percentage Needing Teeth Filled or Ext.	Percentage With Cavities In Perm. Teeth	Percentage Needing Ext. In Most Cases Infection	Percentage With any Fillings
Second Grades	1,087	86.9	49.8	52.3	19.0
Country Schools	523	81.0	47.0	42.0	12.2
Miscellaneous	2,431	77.0	45.8	37.0	22.4
Total	4,041	81.6	47.5	43.8	17.9

ACCOMPLISHMENTS IN ENGINEERING

The advance in sanitation throughout the state is shown in the annual report of the Bureau of Engineering, one of the oldest bureaus in the department. Extracts from the report follow:

"The number of filter plants has increased from 23 in 1926 to 28 in 1928. These plants serve 43 municipalities having a population of 48.6 per cent of the state's population. New filter plants are operating at South Haven, Grand Haven, Midland, Utica and Rockford.

"Fifty-three chlorination plants serve 55 municipalities having a population of 11.7

per cent of the state's population. Sixty per cent of the population of the state is supplied with water which receives treatment either by filtration and chlorination or by chlorination alone.

"A summary of the water supplies of the state corrected to June 30, 1928, is as follows:

Total number of public water supplies.....	331
Municipal ownership	291—87.9%
Private ownership	34—10.4%
Combined ownership	4— 1.2%
State ownership	1— 0.3%
Federal Ownership	1— 0.3%
Ground water sources	209—63.2%
Population served	751,873
Surface water sources	112—33.8%
Population served	2,517,179
Ground and surface sources	10— 3.0%
Population served	58,337
Filtration and Chlorination, 28 plants serving 43 municipalities.	
Population served	2,230,432
Chlorination only, 53 plants serving 55 municipalities.	
Population served	538,217
Total population of state	4,591,000
Urban population	2,846,420—62.0%
Rural population	1,744,580—38.0%
Population served by public water supplies.....	3,327,389—72.5%
Population served by treated water supplies.....	2,768,649—60.3%

MUNICIPAL WATER AND SEWER PLANTS

During the past two winters a complete inventory of the files of the municipal water and sewer plans was made. Based on these findings, a campaign was started through correspondence and visits, calling the attention of the city and village authorities to their duty of filing complete plans with this department. Revised public water supply and sewerage and sewage disposal questionnaires were sent to all cities and villages of which there was no recent knowledge concerning their water and sewer systems. Response to these inquiries was most gratifying. A total of 108 water system and extension plans and 190 sewerage system and extension plans were received and examined. As the result of this work our files at present are quite complete.

RAILROAD WATER SUPPLIES

The same procedure of inspecting water supplies and collecting samples from railroad sources was continued during the past two years. All Lower Peninsula supplies were inspected twice during the year while those in the Upper Peninsula and for the boats were collected once. When the first analysis on a supply was unsatisfactory, more inspections were made to locate the source of contamination and advice given the railroads for corrective measures.

"In 1928 a new procedure in collecting samples has been started. All municipal supplies that are under laboratory control are inspected and samples are collected

once a year. Those that are not under laboratory control, but as a result of our supervision are known to be safe, are visited twice yearly. The private sources owned by the railroad or by individuals and used by railroads are inspected and samples collected three times a year. The boat supplies are still collected once a year.

"In co-operation with the U. S. Public Health Service, beginning this year, our railroad water inspector visits railroad yards where pullman cars are parked to house people attending conventions, football games, and other large public gatherings, to inspect the sanitary conveniences relative to water supply and sewage disposal.

"During the fiscal year ended June 30, 1928, the railroads required 158 certificates for water obtained in 85 cities. This necessitated the collection of 332 samples of water. The supplies were classified as 65 municipally owned, six privately owned, and 19 owned by the railroads. The steamship companies requiring certificates numbered 32. These certificates were issued to cover 13 public supplies.

ROADSIDE WATER SUPPLIES

"The work of inspecting roadside water supplies started in 1925 has been continued. The progressive increase in percentage of safe supplies from 63.7 per cent in 1925 to 83.6 per cent in 1927 leads us to believe that much good has been accomplished. We can see no reason why the improvement in percentage of safe supplies has not been due very largely, if not entirely, to our work of testing and education.

SWIMMING POOL SUPERVISION

"In February, 1927, a circular was sent to the superintendents of schools of all the larger towns in Michigan, asking for information on the number and location of outdoor and indoor artificial swimming pools in their respective localities. Through this, and other means, we have obtained data on the locations of 138 pools, 40 of this number being located in the city of Detroit.

"Since that time, inspections of all indoor and several outdoor pools have been made, totalling 82 inspections. A swimming pool questionnaire was filled out for each pool, providing the Bureau of Engineering with complete and accurate data on the equipment available. There still remain 16 outdoor swimming pool inspections to be made.

"This constitutes the first attempt to

supervise the operation of swimming pools in the state. The increasing popularity of swimming has caused much discussion of the sanitation problems of pools, and our attempt to help solve these problems has been received with favorable comment. When all the pools have been inspected it is planned to formulate regulations covering operation and construction. These regulations will be made with the view of standardizing the use of equipment, and as the minimum sanitary standard for all pools.

"Inspections thus far have shown the need of state supervision. Most operators are interested in the care of their pools, but are handicapped by lack of knowledge concerning the proper use of the equipment.

"Most pools in the state use chlorine or one of its compounds for water disinfection. At these pools we have urged the use of mortho-tolidin testing set to determine the amount of residual chlorine carried by the pool water, thus eliminating the need of depending solely on bacteriological tests to determine the sanitary quality of the water.

"The 'fill and draw' type of pool is rapidly becoming obsolete. At one or two pools of this type, purification equipment is contemplated. The same may be said concerning the use of ultra violet ray machines for water sterilization. These machines are either being replaced or augmented by other means of treatment which assure results.

STREAM POLLUTION CONTROL

"Early in July, 1926, a representative of the Conservation Department, an assistant attorney general, the sanitary chemist and the assistant sanitary engineer of the Department of Health, went to the Upper Peninsula where a very careful and detailed inspection was made of all the paper mills, gas plants, chemical plants, and many of the milk handling plants. Conferences were held at Newberry, Marquette, Houghton and Crystal Falls similar to the one held at Lansing previously. At these conferences, 26 incorporated municipalities and 21 townships were requested to have representatives present. To them the problems of stream pollution were presented, and orders were later issued to 16 of the municipalities.

"At Newberry six chemical plants and eight dairy plants were represented, at Marquette four gas plants, at Houghton four dairy plants, and at Crystal Falls 14

dairy plants. With each of these industrial groups the problems of pollution created by their wastes was discussed and the relief measures outlined.

"The six months' period allowed the municipalities at the Lansing conference having expired, a check was made to see what progress had been made. It was found that of the 77 municipalities receiving orders, 23 had submitted reports, 17 had employed engineers, five required no reports, and 32 had taken no action.

"Letters were therefore addressed to 47 municipalities asking for a progress report. Similar letters were later sent to the industries. The results have been most gratifying. Only a very few of the municipalities have indicated that they do not intend to take any step toward relieving conditions created by their sewage, and on these it is planned to institute court proceedings at an early date.

"The experimental treatment plants operated by the tanning and canning industries were very successful and sufficient information was obtained to warrant their continuance through the second year. The tanning waste plant has handled all but the sludge problem and it is expected that by the first of September the experiment will have been completed, with an expenditure not to exceed \$4,500, an amount equivalent to three-fourths of the sum that the tanners expressed themselves as willing to pay on the experiments. Experimental plants handling pea, peach, tomato and strawberry wastes show progress, as does the work with butter and cheese wastes. Every paper mill in the state has made rapid strides in reducing the amount of fiber going into the streams and it is now common practice among them to show less than one-fourth pound of fibre loss per 1,000 gallons of waste. The question of what to do with the sulphite liquor still remains the big problem of this industry.

"At the present time records in the department show that municipalities ordered to start work on sewage disposal systems have responded in the following manner:

Reports submitted	54—69.4%
No report necessary	5—6.3%
Engineers employed	6—7.7%
Working locally on plan	6—7.7%
No action taken	7—8.9%

RURAL SCHOOL WATER SUPPLIES

"In November, 1927, a survey was begun of rural school water supplies. All rural schools in Ingham county and nearly half of those in Clinton county were vis-

ited before the weather prohibited the continuance of the work. Of the 156 schools visited in both counties, 85 per cent had safe tests. The work done in these two counties was experimental, to find out whether it was feasible to carry on the survey in other counties. We believe that this is a valuable activity, and the work will be continued when schools reopen.

PREVALENCE OF DISEASE				
July Report				
Cases Reported				
	June 1928	July 1928	July 1927	Average 5 yrs.
Pneumonia	453	186	171	171
Tuberculosis	554	270	489	555
Typhoid Fever	22	25	51	61
Diphtheria	332	210	255	295
Whooping Cough	658	789	661	682
Scarlet Fever	941	392	436	499
Measles	3,712	1,197	397	893
Smallpox	223	89	95	99
Meningitis	28	16	13	11
Poliomyelitis	3	1	6	6
Syphilis	1,563	1,085	1,346	1,139
Gonorrhea	981	740	750	897
Chancroid	7	10	4	12

CONDENSED MONTHLY REPORT				
Lansing Laboratory, Michigan Department of Health				
July, 1928				
	+	—	+-	Total
Throat Swabs for Diphtheria ..				1011
Diagnosis	35	219		
Release	40	160		
Carrier	15	527		
Virulence Tests	6	9		
Throat Swabs for Hemolytic Streptococci				771
Diagnosis	105	124		
Carrier	129	363		
Throat Swabs for Vincent's ..	38	216		254
Syphilis				7143
Kahn	1032	6085	24	
Wassermann		2		
Darkfield				
Examination for Gonococci	140	1264		1404
B. Tuberculosis				411
Sputum	61	303		
Animal Inoculations	1	46		
Typhoid				143
Feces	3	38		
Blood Cultures	2	37		
Widals	5	46		
Urine	1	11		
B. Abortus	6	48		54
Dysentery				37
Intestinal Parasites				20
Transudates and Exudates				205
Blood Examinations (not classified)				106
Urine Examinations (not classified)				331
Water and Sewage Examinations				887
Milk Examinations				85
Toxicological Examinations				6
Autogenous Vaccines				10
Supplementary Examinations				112
Unclassified Examinations				521
Total for the Month				13511
Cumulative Total (fiscal year)				13511
Increase over this month last year				1406
Media Manufactured, c. c.				123918
Typhoid Vaccine Distributed, c. c.				1770
Diphtheria Antitoxin Distributed, units				20732000
Toxin Antitoxin Distributed, c. c.				7660
Silver Nitrate Ampules Distributed				4476
Examinations Made by Houghton Laboratory				1597
Examinations Made by Grand Rapids Laboratory				6104

THE JOURNAL

OF THE

Michigan State Medical Society

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SEPTEMBER, 1928

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

THE 108TH ANNUAL MEETING

The Michigan Territorial Medical Society had its beginning in 1821. It is considerably over a century since the first getting together. Remember the date of the 108th annual meeting in Detroit, September 26-28. The program has been published. It is complete, rich and varied in interest. Attention is directed to the reports of standing committees which occupy the major portion of this number of the Journal.

In addition to the scientific papers which will be presented, there will be clinics at various hospitals. In keeping with the post-graduate idea every effort has been put forth to make the program helpful to all concerned.

It is hoped that the attendance will be large. The weather will doubtless be more comfortable than it is as these lines are being written. Detroit is well supplied

with good, comfortable hotel accommodation.

SOME MEDICAL PROBLEMS

The present state medical society dates back but a few years. Before the re-organization (1902) there have been several years at a time when there has been no annual meeting of Michigan physicians. A little over a hundred years ago a medical society was started in Detroit. This medical organization three years later presented Lieutenant William Beaumont with Honorary membership for his epoch making paper on researches in gastric digestion. The territorial medical society of Michigan had extensive power, namely to examine applicants, grant and revoke licenses to practice medicine. Later this power was taken away and for many years Michigan had no legislative restrictions regulating the practice of medicine.

In 1889 was passed the Chandler Medical Act and the power of licensure was placed in the hands of the Michigan State Board of Registration in Medicine, composed of ten physicians. This board for the last five years has admitted 1,550 physicians to practice (300 a year) which would seem to be an ample supply of new doctors. It is but rarely, however, that one of them enters practice in a small community. The National Grange claims that pre-medical and medical standards can be lowered and that physicians will then locate in rural communities to relieve dearth of doctors. There are various reasons why physicians will not locate in the small community. If the rural community can stop the emigration of its own young people to the city and can offer better schools for the doctor's children, better facilities to practice his profession and will support him financially so that he can work satisfactory to his standard of practice, the problem of the better distribution of physicians may be solved, and not before. A lower standard will not solve the problem, because the farmer and his family are more observing and critical than are their unsophisticated brother in the city. The faker or the poor doctor does not last long in a rural community because news travels fast in the country. A poorly trained doctor is probably the most dangerous man in any community.

* * *

There is the problem of the irregular practitioner limiting his treatment to a single principle of the healing art, the medical profession believes that he should

at least possess a good general education. Below a certain level he is a real menace to a community because of his ignorance. He either cannot recognize contagious disease or denies its existence. We believe that the more education he has the less likely he is to take up a passing fad which can only have a possible service in a very limited field. The essential part of successful treatment is a correct diagnosis and one is unable to do this unless he has been thoroughly trained in the broad field of medicine. Otherwise it is pure imagination or routine guessing. A fall in attendance from several thousands to 200 in a year is evidence of the final disappearance of one such school. But new schemes will take its place. Abram's electronic apparatus, although it had no electric energy of any sort according to reports of electrical engineers, has gone into the discard along with the oxydonor and the electric pads and belts.

* * *

The public and the medical society is confronted with the problem of protecting innocent victims from the ignorant and ill trained practitioner of the healing art. The various cults and schools would like to have the same standing and use the term doctor to fool their dupes. Florida has recently had an exhibition of osteopaths being admitted to the same standing as doctors of medicine and it is said they will control the next state board of health in that state. Kentucky has recognized the chiropractor.

Michigan, too, has the same task as other states of purging from its midst the unscrupulous charlatan and montebank.

* * *

Some of our problems lie within the medical profession. When 35 per cent of the doctors in most of our cities are practicing a specialty and 40 per cent of our recent graduates at once limit their work to a specialty and 40 per cent more are working to become specialists we cannot be said to be meeting the demands of the public. No one should be a specialist until he has laid a firm foundation in general practice. It is exaggeration to claim that medicine is so extensive that no one can cover the entire field. There are certain essential and fundamental truths in medicine that must be mastered before one should enter even a limited field.

A recent investigation in Chicago shows that the majority of people do not go to a doctor when they think they have a minor ailment. This perhaps has grown out of

the indifference, lack of attention or sympathy of the doctor in taking care of these cases. Especially is this true in cases of fear. The patient is bound to go where he will receive attention.

In the campaign for urging annual health examinations we found not a few physicians have pooh-poohed their patients, slapping them on the back and without any examination whatever stating that everything was "O.K."

In seventeen towns it has been found that physicians' house calls were lower, than the taxicab fare to the same homes. The physician is imposed upon by life insurance companies for reports in which he may have treated the patients years ago. At times this entails quite an extensive search of records but I have failed to hear of a single company who even intimated that these reports were of great value to the company.

Thirty-four of our universities are teaching their students to expect almost free medical service while they are students at their university. University clinics also cater to the pay patient to help balance the financial books. We believe the principle is wrong of educating doctors and then entering into competition with them. Medical colleges need patients only for instruction of students and the humanitarian principle of helping those who have been unfortunate in the struggle of life. The University of Chicago recently, after a conference with a committee from the Cook County Medical Society, abandoned their proposal of a pay clinic in connection with the medical college.

And finally note this from the Journal of A.M.A.: "Alberta Offers Operations at Cost Price.—George Hoadley, minister of health of Alberta, in addressing a meeting at Calgary during child welfare week, stated that the traveling clinic which he had organized had visited 2,346 patients, examined 10,270 school children and visited 385 schools, and that of the 122 places desiring its services the clinic had visited 44. According to the Journal of the Canadian Medical Association, he emphasized the fact that operations can be had at cost price which is much lower than is made by physicians throughout the province."

—H. E. Randall.

SEASICKNESS

Seasickness has been ascribed to so many causes, and so many remedies have been suggested that it still remains one of

the obscure conditions so far as any exact etiology is concerned. The very name has been associated so long with ocean voyages that many precise people apparently feel that to become nauseated on board ship is the proper thing to do, just as two or three generations ago it was the proper thing in polite society for young women to faint, with the ever present bottle of smelling salts as a remedy.

Bennett in the *British Medical Journal* thinks much of seasickness could be prevented by autosuggestion which should be practised at least a week before sailing. The writer, however, advises light meals during this period with abstinence from meat. Another writer advises the oral administration of glucose, his *modus rationis* being, that the effect of the motion on the labyrinth is to produce a deficiency of blood sugar which in turn causes the nausea and other symptoms associated with seasickness. Nerve sedatives have been advised. Some ship doctors pin their faith to atropine.

There is no doubt, however, that good ventilation acts as a preventive to a great extent. Sanitation on board ship has greatly lessened both morbidity and mortality on sea voyages.

Contrast modern sea-faring with the following picture by a German passenger who made a voyage to Pennsylvania in 1750. The journey lasts fully a half a year.... During the voyage there is on board these ships terrible misery, stench, fumes, horror, vomiting, many kinds of seasickness, fever, dysentery, headache, constipation, boils, scurvy, mouth-rot and the like, all of which comes from old and sharply salted food and meat, also from very bad and foul water so that many die miserably.... Misery reaches the climax when a gale rages for two or three nights and days so that everyone believes the ship is going to the bottom.... When in such a gale the ship is tossed from side to side by the storm and waves, so that no one can either walk, sit or lie and the closely packed people in their berths are thereby tumbled over one another both the sick and the well—it is readily understood that many of these people, none of whom had been prepared for hardships, suffer so terribly from them that they do not survive it.... Many hundred people necessarily die and perish in such misery, and must be cast into the sea.

CARDIAC MURMURS*

Sir James Mackenzie was one of the first of the modern group of cardiologists to call attention to the fact that too much emphasis was being laid on the presence of valve murmurs. The result has been that, in many cases, the physician has been content to entirely ignore them, which is a much graver error than the other. Life insurance companies, from long experience, have come to the conclusion that abnormal heart-sounds have a distinct bearing on the morbidity and mortality of their risks and some companies refuse to take, at standard rates, any applicant who is the possessor of any type of heart murmur. That caution is necessary in cases in which so-called functional murmurs are present, is well illustrated in a personal case, seen about ten years ago, the patient having been referred for mitral insufficiency. He was a man who was a life insurance agent and who had, a year prior to this, received a considerable increase in insurance. On first thought, on account of his peculiar lemon-yellow appearance, the diagnosis of pernicious anaemia was made, which was confirmed by the blood-findings. The course of the disease being very rapid, he died about six weeks later. In this particular instance, the presence of the murmur indicated something, it was true, of importance in the heart but something of far greater importance in the general system.

* * *

Mackenzie's classification divides valve murmurs into three classes: physiological, functional and organic. The physiological are the ones in which murmurs are present but there is no reason to believe that there is any form of pathology. Such are illustrated by those patients in whom particular postural changes cause the appearance or disappearance of the murmur. By functional are meant those forms of heart murmur which are due particularly to myocardial pathology, such as relative insufficiency, due to dilatation of the mitral ring. The organic murmurs are due to structural changes in the valves themselves. It has for years been my personal contention that murmurs are always of importance, just as in ordinary life, a knock in a motor is important. It is up to the physician to determine whether any serious pathological condition is present. A heart normally situated, normally sur-

* Cardiac murmurs by James Orr, physician at The James Mackenzie Institute for Clinical Research, St. Andrew's, Scotland, in the July 1923 number of the *Canadian Medical Journal*.

rounded and normally functioning should not be productive of any cardiac murmurs; therefore, it is the duty of the physician to determine what these murmurs represent and of how much importance they are in causing changes which will impair the cardiac function.

* * *

Orr properly gives most of his space to diastolic murmurs, which as he states, are usually organic. This is not necessarily so, however; in our experience years ago, we had an old alcoholic case, in which marked systolic and diastolic murmurs, the systolic at the mitral and the diastolic at the aortic valve, confirmed by peripheral findings, made us reach the diagnosis of aortic and mitral insufficiency. On autopsy, there was fatty degeneration of the cardiac muscle and the valves were all in perfect condition, so that these murmurs were evidently of the relative type. It is true, however, the majority of these represent organic changes. The diastolic murmur of aortic insufficiency is usually recognized, although at times it requires careful consideration of the case and the study of vascular changes. In a case seen a few days ago, a diagnosis of aortic insufficiency had not been made, although the diastolic murmur was present, replacing the aortic second sound, yet not readily appreciable; there was pistol-shot sound in the brachial, capillary pulse and the pulse-pressure was moderately increased, that is to say, 60 mm. mercury.

* * *

The diastolic murmur, however, of mitral stenosis is far more interesting because it remains throughout the variety of changes likely to take place in this disease; even when auricular fibrillation supervenes, as it so often does, the diastolic murmur persists and it often is present when there is no definite pre-systolic murmur, so that it is the most valuable single auscultatory sign in the diagnosis of mitral stenosis. He mentions the fact that with mid-diastolic murmurs, heart block is usually present. Systolic murmurs are not particularly emphasized by him, as he has evidently been convinced by data presented by Dr. Cabot in his book, "Facts on the Heart", that mitral insufficiency is a rare disease. We do not believe, however, that many clinicians are of this opinion and that clinically, at least, we see more cases of mitral insufficiency than of mitral stenosis. That, in any of these cases of mitral insufficiency, there

is considerable thickening of the valve, so as to offer some obstruction to the blood-flow, might be granted but the main change in the blood-flow is in the fact that regurgitation is present; that is, that insufficiency is the preponderating factor in the cases.

Systolic murmurs of a rough character, present in the aortic area, do not necessarily mean stenosis and can only be certainly diagnosed when associated with examination with the polygraph. In some of these cases, although there is a very rough type of murmur, a normal pulse-tracing is found; it is only where a plateau pulse is found in both left and right radials that a diagnosis of aortic stenosis is warranted.

Walter J. Wilson.

THE RETIRING PRESIDENT

We take this opportunity to pay our respects to Dr. Herbert E. Randall who will be the immediate past president of the Michigan State Medical Society before the next number of the Journal comes out, when we will be able to announce his successor. Dr. Randall has proven himself an efficient executive. While the presidency of a State Medical Society is looked upon by a great many as an honorary position, it is becoming less and less a sinecure if it ever could have been called such. It marks the culmination in Dr. Randall's case of many years of faithful service to the profession of Genesee county and to the state as well.

Dr. Randall after graduating from the Detroit College of Medicine was assistant to the late Dr. H. O. Walker, a name well known to the older members of the profession. For sixteen years Dr. Randall was a partner to Dr. W. J. Kay of Lapeer, Mich. He has held a number of hospital appointments in Flint; has seen service abroad as Chief Surgeon of Base Hospital No. 36, at Vitell, France. It is almost needless to say that he is a member of everything in the way of medical societies from his own Genesee County Society to the American Medical Association. During the past year Dr. Randall has found time to be present at a large number of medical functions in the way of Society meetings and conventions all over the state. Unobtrusive in nature the doctor's career as President of the Michigan State Medical Society has been one of quiet activity and he relinquishes the office with the gratitude of the Society for work well done.

RETRIBUTION

A peculiar medical-legal case has come to light in the State of Massachusetts which has resulted in the suspension of a surgeon's license to practise for one month, and that of a general practitioner for three months. The general physician called in the surgeon in consultation over a patient with a very serious disease. The two decided on surgical treatment with the result that the patient died of surgical shock the day following the operation. Before the operation the patient was induced to assign his bank account to the physician. After the patient's death the physician went to the bank and withdrew money from the patient's account without informing the bank officials that the patient was dead. It was agreed between the two doctors that the surgeon should be paid \$1,000, which amount was paid. The entire estate of the patient was \$3,250. The matter was brought before the Board of Registration in Medicine with the result that the aforesaid suspensions of both doctors were decided upon by the Board. An appeal was made from their decision to the Supreme Judicial court which tribunal sustained the Board of Registration in Medicine.

Once in a great while a member of the profession will allow his greed for gain to overcome moral scruples, which he evidently does not possess. Be it said to the honor of the medical profession that such instances are very rare in which a physician or surgeon takes advantage of a deceased patient's estate be it large or small, and so long as Boards of Medical Registration take the viewpoint of that of the Massachusetts, the medical profession as well as the public are safe.

EDITORIAL NOTES

This month the leading editorials are by the president of the Michigan State Medical Society, Dr. H. E. Randall, and by Dr. Walter J. Wilson. This is the last number of the Journal before the annual convention which takes place in Detroit this month, as announced. Dr. Randall has taken occasion to call the attention of the profession to some of the problems it must sooner or later consider. Dr. Wilson comments on the evaluation of heart murmurs. Dr. Wilson has confined his attention to

cardiology over a number of years and is thus entitled to speak on a somewhat technical subject. The editor takes this opportunity of thanking both these editorial contributors.

The term quack dates back to the time of Paracelsus (1491-1541) whose followers were known as Quacksalbers or simply quacks. Mercury appears to have been the chief drug used by this cult; hence the name was derived from queckselber or quicksilver. The term "quack" has also been explained as a shortened form of Quack Salver from the custom of using "salves", the "quack" having its origin in the kakaphoniou utterance of a duck. This explanation is inspired by the wholesale raid upon the "quacks" of this state by the state police.

The annual meeting of the Upper Peninsular Medical Society was held at Newberry Wednesday and Thursday Aug. 1 and 2. The registrations numbered 61. The scientific sessions were held during the afternoons. The papers were of excellent quality. They will constitute the contributed articles of a future number of this Journal. Among those present not residents of the Upper Peninsular were Dean Hugh Cabot of the Medical Department of the University of Michigan, Dr. George McKean, Dr. C. F. McClintock of Detroit, Dr. H. E. Randall, President of the Michigan State Medical Society, Dr. Guy L. Kiefer, Commissioner of Health, Lansing, Mich., Dr. Crulee, Chicago, and the editor of the Michigan State Medical Society Journal.

NEWSHOLME NUGGETS*

It is largely through study and disease and its treatment that knowledge of its prevention has come.

Individual disease is, furthermore, a fruitful cause of disease and incompetence in others, either by infection, or as the result of the destitution which so often results when disease occurs in one member of a family.

A romantic and most important chapter in the history of health is that dealing with health in relation to food and drink, including alcohol.

An erroneous doctrine strangles investigation and original thought; and the history of medicine is strewn with wreckage showing unnecessary suffering due to delay in the study of the natural history of disease and of the collateral biological sciences.

* From Evolution of Preventive Medicine by Sir Arthur Newsholme. Published by the Willams and Wilkins company, Baltimore.

As in other branches of knowledge, orthodoxy has been the bane of progress in medical science, though each new error has usually embodied some element of truth and has perhaps formed a necessary stage in the slow evolution of knowledge.

The first man was the first doctor, and probably also he was the first obstetrician.

Herodotus states that although among the Babylonians the chief doctors were the priests, the Babylonian sick were often brought out into the market place to elicit the views of passers-by as to their treatment.

In the ancient world and right through the Middle Ages of the Christian era, the belief in the supernatural origin of disease persisted, and no real advance was possible in medical or general science so long as this belief dominated mankind.

Before Harvey the vascular system was regarded as a source of supply by irrigation, there being no conception of a circular movement of the blood except partially as regards the lesser or pulmonary circulation.

As infection from without is the source of the main disease of mankind, the growth of our knowledge of infection forms a supremely important part of the history of preventive medicine.

HOW IT AFFECTS THE OTHER FELLOW

(Atlantic Medical Journal)

Destructive criticism in the ranks of the medical profession is, of all things, most condemnable; a wise look, a shrug of the shoulder, or a shake of the head may be sufficient to incite a suit for alleged malpractice. Many of the cases which reach the courts are the result of the inference of physician number two, who looks at some deformity and suggests that "the treatment, of course, was so and so." Innocently he stirs up the thinking machine of the patient, who now recalls that his doctor did not treat him as this wise one has suggested, and the next thing is a suit for alleged malpractice. May all who read this article think well before expressing an opinion or even suggesting a plan of treatment when consulted by a patient formerly under the care of another physician or surgeon. It is so much easier to congratulate the individual on the results secured for him by his attendant. This will help to preserve the good feeling that the patient had for his former attendant, instead of poisoning his mind against one who did the best that could be done for the injured person.

"Do unto the other fellow as though you were the other fellow."

AD LIBRUM

Go, tell them what thou bringst exceeds the wealth
Of all these countries for thou bringst them health.
Drink not much wine, sup light, and soon arise.

Use three physicians still: first Doctor Quiet,
Next Doctor Merryman, and Doctor Dyet.

Rise early in the morne. . . .

Both comb your head, and rub your teeth likewise.

Long sleepe at after-noons by stirring fumes,
Breeds Slouth and Agues, Aking heads and Rheums.

Wine, women, baths, by Art or Nature warme,
Us'd or abus'd do men much good or harme.

Scorne not Garlicke, like to some that thinke
It only makes men winke, and drinke, and stinke.

This little poem is said to have been written for the son of William the Conqueror. From *Evolution of Preventive Medicine* by Newsholme.

THE LAST OF ALL

Whether it's Heaven—or whether it's Hell—
Or whether it's merely Sleep
Or whether it's something in between
Where ghosts of the half-gods creep—
Since it comes but once—and it comes to all—
On the one fixed, certain date—
Why drink of the dregs till the Cup arrives
On the grey day set by Fate?

One by one till the line is passed—
The gutter-born—and the crown
So what is a day—or a year or two—
Since the answer's written down?
What is a day to a million years
When the last winds sound the call?
So here's to the days that rest between—
And here's to the last of all!

—Grantland Rice, in
A Physician' Anthology of
English and American Poetry.

POST GRADUATE CONFERENCE ANNUAL MEETING*

Very little could be added and certainly nothing could be subtracted from the unusually interesting and instructive program as arranged by Dr. W. J. Kay and Dr. Zemmer, President of the Lapeer County Society. It was successful from point of interest, at least, such was the unanimous decision of the seventy-one members who attended the meeting. Indeed, St. David smiled; his sunshine called the members from their pills; and for those who left before the completion of the program he sent his showers of disapproval.

The meeting was called to order at 10.00 a. m. The papers were limited to one-half hour each. They were snappy and full of practical interest. Dr. Heavenrich, Councilor from the seventh district presided and in his opening stated that in his opinion the care of the feeble-minded child and the insane patient involves a greater burden than the care of those physically ill.

Dr. Randall prefaced his remarks with the statement that doctors have not paid sufficient attention to the mental disorders. It is said that there is more mental pain in the world than there is physical suffering and he thought that this was true. There are 96,000 in public schools today who will be committed to an institution some time in their life. These cases should be detected early by examining physicians that institutionalizing may be prevented and that they be improved through training at home. At the present time there are 70,000 feeble-minded in Michigan. Doctors should be more interested in the mental diseases for they see them at the beginning when most can be done.

* Report of the Annual Meeting for current year of the Post Graduate Conference—Seventh District, Michigan State Medical Society, held at Michigan Home and Training School, Lapeer, Michigan, Thursday, June 28, 1928.

Mrs. Waterbury, director of the Welfare Department of the Michigan Home and Training School spoke on the subject of how a physician can aid the mentally sub-normal of his own community. Doctors examine the patients with the idea of having them committed to Lapeer. The court assigns to them the duty of saying whether they are feeble-minded or not. The physician could be very helpful to the institution if he would keep in mind that the problem of the feeble-minded is not only one of commitment to an institution but much more their adjustment in the home and community. The commitment is but the beginning. The return to the community with some training fitting them better to care for themselves is the next step. The statement that the doctor submits to the judge should not be: "She does not know her own age. She is not oriented; has no school knowledge; practically no general knowledge, or comprehension, and no moral sense." For while these are probably true and sufficient for the judge in making the commitment, for the best care of the child much more is required to be known in detail about their home, family, school life, community life and habits. If the rest of the family is similar to the patient that should be stated. It is necessary for the institution to have the background of the child's life and considerable about its activities to be able to do the best for the child in placement, training, vacations, and final disposition. No one is so well qualified as the family physician to give this information because he knows the history of patient and family background better than anyone else.

Dr. Wilson of the Michigan Home and Training School staff spoke on history taking. The personal family history blank as sent out by the institution was reviewed in detail and the importance of answering each question on the blank with the significance and purpose of each question was fully explained. An appeal to the general practitioner was made that he co-operate more fully and carefully in this respect.

Dr. W. J. Kay, Superintendent of the Michigan Home and Training School spoke on the feeble-minded as a social problem. Only the higher types of the feeble-minded were discussed. Most people when thinking about the feeble-minded have in mind the idiot, but they are no problem in an institution—feed them, keep them clean and as happy as possible is all there is to it. They should be in a state institution for very few families are equal to the burden of caring for them. This is also true of the low grade imbecile. But a great number of those who by mental test will be named as feeble-minded are able to make a contribution to the community, are able to earn in part, or in whole, their living, if properly supervised; they need not be a liability but an asset to any community. The Michigan Home and Training School for this group is not a detention home, but it is a training school and its wards should have much the same status as the child going to a boarding school. It is the opinion of some that the child should be completely separated from its home. Dr. Kay does not accept this for if the home is but a very ordinary one, no institution is as good no matter how well organized. When a child leaves a community the community has something to do in correcting the conditions that resulted in the break-down of the child. This should be done in a very positive way so that if the home needs improving it will

have had time to get familiar with the change before the child comes back.

It is not conceivable that the state can care for during their whole life time the number of this type that is committed, therefore, the absolute necessity for their returning to the community and the necessity for the community beginning early to prepare to receive them. What success we have with them in training is because we attempt to understand them and it is equally true that when they fail in the world it is because their family or employers do not understand them and have little patience with them. One does not need to be a trained psychologist or a social worker to help these children in the community. It only requires a real touch of humanity and a little appreciation of their problem. They respond to kindness and cruelty; they smile and frown; they love and can hate; they are naturally honest and can be dishonest; they are naturally truthful; they are taught early in life to lie in self-defense; they are much like we were before we became sophisticated; if we teach them to do wrong they will go us one better for the lack of judgment that restrains the evil in us. To quote Dr. Wallace of Wrentham: "The morons who are making the trouble in the community are exactly the same classes who are making the trouble in the higher mental levels, i. e., pathological liars, thieves, prostitutes, rovers, psychopathic personalities, neurasthenics and those suffering from laziness, brainstorms, inferiority complex, temperamental episodes, emotional instability and the like." In all of the above they are not much different from their normal brothers.

If the physician is to help, the feeble-minded should be recognized early. The family physician should be able to do this and should not side-step the responsibility of saying so. The school should have his aid in determining their mental ability and their training should be largely manual, for their success depends little upon mental training.

It was pointed out that the Michigan Home and Training School has 175 out earning their living under supervision of the social worker. They are not only earning their living but have succeeded in accumulating a savings account of \$28,000. This same thing can be done in any community if those interested in the welfare of the sub-normal child or the way-ward child would give just a little time to it.

Dr. Blanche Weil of Flint, psychologist of the Whaley Memorial home spoke of the pre-school child and diagnosing mentality of infants. She demonstrated the Kuhlman on a one year old child. The interpretation and practical application of this test was revealed in a very interesting and instructive manner. Dr. Weil then spoke of certain aspects of her work with school children and illustrated the importance of careful supervision during this age.

Lunch was served at 12:30. Here the physicians had opportunity to observe how well the patients have been trained to serve at the table. All of the waitresses in this dining room were patients. The meeting was called to order again at 1:30 p. m. Dr. Zemmer, President of the Lapeer County Society presiding.

The first speaker after lunch was Dr. Cope, who spoke of the fact that the general practitioners should make considerable use of the state laboratories, but emphasized laboratory work that he must do for himself. He emphasized the importance of 24 hour total urine tests as opposed to the single sample. He discussed Benedict's test

for sugar as being superior to Fehling. Pregnancy increases carbohydrate intake and sometimes gives a positive reaction, so that if at any time there is a question of diabetes mellitus blood sugar examination should be made. Discussing blood examinations Dr. Cope did not place any confidence in the tallquist method of determining hemoglobin percentage. The Dare method is satisfactory if one can match colors accurately, but for the most people probably the ahli instrument is most satisfactory. As regards white blood count, the differential examination should always be made by counting on glass cover slips. This is more accurate than counting on glass slides because the white cells can be distributed more evenly over the surface. The white count and the differential count is of value in diagnosing acute infections. In chronic conditions there may be no change in white count but the differential count will reveal the presence of the chronic infection. Laboratory work on the blood is of value in pernicious anemia. Size, shape or condition of red cells is to be noted. There is also a low white count in pernicious anemia. It is not necessary to have nucleated reds to diagnose this condition. It is often of value to estimate the coagulation time of blood and in doing so the test tube method is best. Blood nitrogen will not diagnose a kidney lesion as the total nitrogen is raised only late in the disease. He urged physicians to use laboratories more frequently, always using them as an aid.

Dr. Hoobler of Detroit spoke on Endocrine Disturbances in Childhood, reviewing the effects of various endocrine organs in turn with regards to effect on growth and development. The larger part of his paper was a discussion of the vitamins as related to the growth and development of the child. Dr. Hoobler's paper was extremely interesting.

Dr. Christian, Pontiac State Hospital, states that while it is true that in the field of organic psychoses many contributions of scientific value has increased our knowledge, the larger field of functional psychoses is barren of many necessary facts which would lead us to a knowledge of the etiology of this state. This type of patient falls into the hands of the physician during the early development of his trouble and is demanding more and more service as time goes on. The family physician is the one who can furnish information as regards to the family and the early history of the warped personalities that find their way to the State Hospitals. Statistics can hardly be kept without the aid of the family physician. To be helpful the general practitioner must understand and accept the basic mental mechanisms of psychiatry all of which is easily within his reach.

Dr. J. Parsons of Ann Arbor spoke on Food Sensitization in relation to mental ability to carry on. He revealed the fact that many disease entities have recently been shown to be due to food sensitization and the cause of which is some common food. Apparently sensitization to food can at times simulate an astonishing number of organic diseases. The elimination of this food from the diet cures these symptoms. He gave a number of cases that failed to carry on in their college work and by elimination of food to which they were sensitive came back to their normal state and were able to do their work at school. Also behavior cases that were quickly restored to normal behavior by the elimination of food to which they were sensitive.

Judge Reed of the Juvenile Court of Detroit gave a very able discussion on relation of the court to the physician. He is of the opinion that in regards to the commitment of feeble-minded to an institution, the human element plays a considerable part. The court must rely upon the doctor to give the proper slant on what is to be done with these patients. Doctors are hesitant about saying that a child with an intelligence quotient of from 50 to 70 is feeble-minded but they are more injurious than the child with an intelligence quotient below 50. These children make up a large percentage of criminals. Early training of feeble-minded children obviates a criminal record. Twenty per cent of the children coming before the court for delinquencies are feeble-minded. Judge Reed cited the case of a boy, age 14, bad habits and criminal record, committed to Lapeer. Waited a long time, then took him in his own home with the idea of seeing what could be done with him. Under the influence of good home conditions and home training he was so improved as to be able to live at home without getting into trouble and later worked in Dodge Brothers earning \$9.50 per day. This kind of solution is so superior to commitment that it makes one feel that commitment is the last thing, after every other effort has been made. A physician's responsibility in this respect is considerable.

Dr. Davis Clarke spoke on schizophrenia and gave a real interesting and instructive discussion just after the manner that makes an impression upon the general practitioner.

Miss Mary Scovill, Assistant Psychologist of the Michigan Home and Training School, spoke on how much does the general appearance indicate mental levels. It was shown that it is practically impossible to guess a mental age from the appearance of an individual. Miss Scovill presented a chorus of 17 girls with special reference to three of the number. The chronological ages varied from 14 to 17 years. Mental ages varied from 7 to 14 years. These morons and borderlines gave three excellent vocal selections. It was related that when this chorus sang outside the institution one of the audience inquired if the chorus was from Detroit. One of the three girls particularly mentioned appeared quite bright but her mental age was that of a middle grade moron. Another of these three appeared to have a very low mentality but her actual mental age was one of the highest of the group. Miss Scovill illustrated her talk by lantern slides of children posed and if it had been outside of the institution, no one would have dreamed the subjects were feeble-minded.

Miss Rosebrook, chief of the psychologists staff of the Michigan Home and Training School, was next called, and gave a talk on "Aids in Detecting Mental Subnormality." The importance of estimating mental age was emphasized and the doctors were told where they could obtain forms for routine mental examination as a basis for estimating mental ages.

The day was brought to a close by a Clinic given by Dr. Blakeslee, Assistant Superintendent of the Michigan Home and Training School. He presented many types of feeble-minded with relation to physical development. This part of the program was extremely interesting for those who remained. They saw the children just as they were and recognized them as being typical of some they knew in their own community.

—Dr. Steele.

COMMUNICATIONS

The Editor

Michigan State Medical Journal—In transmitting the enclosed letter from Dr. Carl E. Badgley, Associate Professor of Surgery at the University of Michigan, it is impossible to refrain from a brief comment. Having watched the University hospital undergo a transformation from an unformed and newly initiated unit to an effective agent for human welfare, it has been a surprise and shock to find some members of the medical profession so selfish and jealous of its efforts in the alleviation of human suffering that they can and will send to the State Medical Journal communications of the type of Dr. Baumgarten's letter. Medicine is supposed to be one of the highest and noblest of the professions and in order to be so its practicing members must, it seems to me, impute the same high ideals and motives which they should possess to those of us who are trying our best to serve the citizens of the state in the ablest and most humanitarian way. If I felt that Dr. Baumgarten's opinion presented anything more than a distinct minority point of view, I should be indeed discouraged with the prospect. The splendid co-operation and broad understanding shown by the vast majority of the profession in the state, however, are guarantees of a constructive and favorable future, both for the profession and for the University hospital, in mutual co-operation.

C. C. Little.

Dr. Clarence Cook Little,
President University of Michigan

My dear Dr. Little:

In a letter to the Open Forum of the August 1928 number of the Journal of the Michigan State Medical Society, Dr. E. C. Baumgarten has condemned the mode of operation of the Crippled Children's Act as a state medicine measure. Inasmuch as his conclusions are based entirely upon his personal knowledge of one case which was seen in a Crippled Children's Clinic held in Mount Clemens this summer under the auspices of the State Commission for Crippled Children, with the writer as the examiner, the responsibility of refuting his charges is mine.

The case to which he refers was a most interesting hip problem of a type of which I am making a special study. In this particular case, I deviated from our usual custom and told the attending nurse that I would be very glad of an opportunity to thoroughly study the case. The diagnosis from a clinical standpoint without the aid of a roentgen ray was either an early slipping of the upper femoral epiphysis or a Legg Calve disease of the hip. I do not recall that I attempted in any way to induce the parents or the child to consult me personally, but did urge immediate attention and substantiation of the diagnosis, because of the possibility of displacement of the head of the femur, if it were an early stage of this disease entity. Inasmuch as neither lesion of the hip would require at this stage an operation it is obvious that Dr. Baumgarten was misinformed in regard to the statement as to fees. Neither condition would require hospitaliza-

tion for a longer period than a few weeks at the most, so again he was misinformed. The nurse of whom he speaks flatly denies making any statements as to costs, or that an operation would be necessary.

Dr. Baumgarten seems to forget that the University hospital has no power to give free medical care and hospitalization to patients throughout the state. Such non-paying cases are sent to the hospital from their local community with state orders for their service after a thorough investigation of their financial status has been made by their own county officials. If on the other hand, a patient comes to the University hospital and is capable financially, he is charged a rate which is entirely commensurate with that charged by our colleagues throughout the state. So there is no truth in his statement concerning cutting fees.

Dr. Baumgarten has also found it convenient to forget that the University hospital does not sponsor the Crippled Children Clinics but merely are very happy to do their part in furnishing one of the examiners for the clinics. The personnel of the examining board of doctors for the Crippled Children's Clinics is composed of all the orthopedists in the state of Michigan who devote their full time to orthopedic surgery. The same trumpet blares for the private orthopedists as Dr. Baumgarten infers to be only heard for the University hospital. Seven of these examiners are in private practice in Detroit and are ethically recognized.

In conducting a Crippled Children's Clinic there is no attempt made by the examining surgeon to give any advice as to whom the patient should go. The child is examined and the results of the examination with the advice as to treatment are dictated to a stenographer. These notes are transcribed and then checked by the examining physician and are returned to the local committee. The examining doctor does not see them again unless the patient of his own free will and accord consults him further. The name of the attending physician is attached to the patient's examination record if they wish to have him receive a report of the examination. A copy of the examination is then forwarded to him by the local committee and the patient urged to report to him immediately for advice. The responsibility for notification rests with the local committee.

I wish to emphasize that the state does not favor the orthopedic service at the University hospital. Only one of the ten qualified examiners appointed by the commission is a member of the staff of the University hospital. Also a recent law has made hospitalization of the indigent cripple in other properly equipped hospitals than the University hospital an easy accomplishment if the patient so desires, with an emolument to the qualified orthopedists who handle the case.

The state does, however, feel that it can only recognize as surgeons qualified to treat the crippled child, those who have proven their ability.

Sincerely yours,

Carl E. Badgley, M. D.

Editor of the Journal, M.S.M.S.—I have been reading with considerable interest both sides of the controversy going on between the Illinois State Journal and our own State Journal. I believe a survey of the rank and file of the medical profession in Michigan would show an overwhelming majority supporting the position of Dr. E. C.

Baumgarten. Why all the hullabaloo about the possibility or the probability of eventually having state medicine in Michigan? We already have it. If that statement needs confirmation I can furnish overwhelming evidence of its present existence. True it is, that it is not yet generally recognized as such, but that is only because of the blindness and stupidity of the medical profession itself when it comes to matters affecting their own interests. The people throughout the state, however, know a great deal about it and are taking advantage of its alleged benefits in increasing numbers every year.

A year ago last winter I was the instigator of a bill introduced into the legislature by Representative Culver. This bill was designed to correct some glaring evils in the present method of handling indigent cases and to protect the interests not only of physicians but also the citizens of the various communities throughout the state. It was a medical bill and legislatures are known to be generally hostile to any kind of medical legislation. Nevertheless this bill passed the lower house without a dissenting vote and went to the senate *where it was killed in committee* through the good offices of the lobbyist for the University hospital. I get this information from the former speaker of the House, Representative Wells, of Cassopolis. Mr. Wells further informs me that there is not a doubt in the world that this bill would have passed the senate had it been permitted to come to a vote. Newspaper articles over my signature, giving a few of the reasons for the introduction of the bill were sent by me personally to every prominent official of the State Medical Society as well as to a large number of members of the legislative bodies but not a single shred of support did this bill receive from any of these gentlemen.

What the rank and file of the medical profession of Michigan needs is a rude awakening to the ever growing menace of state medicine in Michigan. Is it going to permit the completion of this program and see it made permanent by legislative enactment or will they take it lying down? The citizenry of the state will help to make the necessary corrections if the physician will help themselves and if they are informed regarding the actual situation.

—E. M. Cunningham, M. D.

Cassopolis, Mich.

NOTE—This closes the discussion on this particular incident.

—Editor.

HEALTH OF SELF-SUPPORTING COLLEGE STUDENT

The health of the self-supporting college student was studied by R. W. Bradshaw, Oberlin, Ohio (*Journal A. M. A.*, June 2, 1928). Of the 420 self-supporting students, 306, or 73 per cent, made 1,202 visits to the student clinic for consultation and treatment. This represents a rate of 2,862 clinic visits per thousand of self-supporting students. Of the 1,253 independent students, 697, or 56 per cent, made 2,515 visits to the clinic, which represents a rate of 2,007 visits per thousand of non-self-supporting students. The self-supporting students from this point of view therefore suffered from 43 per cent more illness than the independent group. In the group of 420 self-supporting students there occurred 250 upper respiratory infections sufficiently severe to bring the student to the health service for treatment. In the group of 1,253 non-self-supporting stu-

dents, there were only 546 similar infections, the former giving a rate of 595 per thousand and the latter 436 per thousand. That is, the self-supporting group suffered from a 36 per cent higher incidence of such respiratory infections as colds during the year than the non-self-supporting group. Per thousand the self supporting group spent 1,269 days in the hospital, while the rate per thousand for the other group was only 947. The self-supporting group, then spent 34 per cent more time in the hospital than the independent group. The 233 self-supporting men spent 153 days in the hospital, a rate of 657 per thousand, while the self-supporting women (187) spent 380 days in the hospital, a rate of 2,032 per thousand, or more than two days per person and more than 300 per cent of the time spent by the self-supporting men. When the two groups of women are compared, one finds that 810 non-self-supporting women spent 970 days in the hospital, representing 1,197 days per thousand. This is only 59 per cent of the time spent in the hospital by an equal number of self-supporting women.

HOW SUCCESSFUL IS THE UPLIFT

A great many sincere men and women are earnestly engaged in innumerable uplift movements. Platitudes about service, public health, education, housing conditions, the crime wave, morals and ethics resound from the platforms of luncheon clubs and even medical societies. We are cynical enough to believe that not much comes of all this activity, and the reason undoubtedly is that we commence our uplifting too late. The attitude of a human being toward life is formed very early and possible his entire personality is pretty thoroughly fashioned before the age of eight.

Medical evangelists work themselves into a holy furor over the hardened medical sinners who never come to a medical meeting, who scoff at hospital staff meetings, and who simply cannot be interested in the problems of organized medicine. Attractive post-graduate clinics are arranged for, but they do not attend. We start too late. Instead of wasting our energies on the obviously damned, let us devote more attention to the young doctor, just born professionally. The intern year is a formative period which medical societies have neglected. Encourage the young doctor to attend meetings, to take part in staff programs, to assume some responsibility in our organization. Very soon, all this will become a habit that will be life-long, and productive of both pleasure and profit.—Genesee County Medical Bulletin.

MARTYRS TO MEDICAL SCIENCE

The announcement of the death of Dr. William Alexander Young at Accra, on the African Gold Coast, of yellow fever, marks the third scientist that this scourge of the tropics has claimed within eight months. The medical world is still dazed by the death of Dr. Hideyo Noguchi of the Rockefeller Institute of Medical Research, one of the world's greatest bacteriologists, who died in the same place ten days ago. The first of the martyr trio, Dr. Adrian Stokes, a brilliant young British pathologist, who won an enviable reputation during the World War, met his death while working on yellow fever at the laboratory of the Rockefeller Foundation at Lagos, Nigeria, last September.—Science Service.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EDITOR: Frederick C. Warnshuis, M. D.

Secretary Michigan State Medical Society

Official Program—108th Annual Meeting, Michigan State Medical Society, Detroit, Michigan

September 26-27-28th, 1928

OFFICIAL CALL

The Michigan State Medical Society will convene in Annual Session, in Detroit on September 26, 27, 28, 1928. The provisions of our Constitution and By-Laws and the official program will govern the business and transactions of this annual session.

Herbert E. Randall, President.

R. C. Stone, Chairman of the Council.

Henry R. Carstens, Speaker.

Attest: F. C. Warnshuis, Secretary.

DAILY SCHEDULE

Headquarters: Book-Cadillac Hotel.

September 25th

6:00 P. M.—Council Meeting.

September 26th

10:30 A. M.—House of Delegates.

2:00 P. M.—House of Delegates.

7:30 P. M.—House of Delegates.

September 27th

9:00 A. M.—Section Meetings.

1:30 P. M.—Section Meetings.

4:15 P. M.—Moving Picture Clinic.

7:45 P. M.—First General Session.

10:00 P. M.—President's Reception.

September 28th

9:00 A. M.—Section Meetings.

11:45 A. M.—Second General Session.

1:30 P. M.—Section Meetings.

HOSPITAL CLINICS

The several hospitals of Detroit will present a series of medical and surgical clinics on September 23rd and 24th. Details will be announced and will be posted at the hotels.

CLINICS AT HARPER HOSPITAL BY MEMBERS OF THE HARPER HOSPITAL STAFF DURING MEETING OF MICHIGAN STATE MEDICAL SCHOOL

1. Tuesday, September 25th, 2:30 P. M.
Surgical Clinic in charge of Dr. Max Ballin.
2. Thursday, September 27th, 2:30 P. M.
Ophthalmologic and Otolaryngologic Clinic in charge of Dr. George Frothingham.
(This clinic is part of the program of the section of Ophthalmology and Otolaryngology.)
3. Friday, September 28th, 2:30 P. M.
Obstetric and Gynecologic Clinic in charge of Dr. George Kamperman.
(This clinic is part of the program of the section of Obstetrics and Gynecology.)
4. Saturday, September 29th, 2:30 P. M.
Medical Clinic in charge of Dr. Hugo Freund.

After the clinics, members of the State Medical Society are invited to inspect the new hospital.

EXHIBITS

A splendid Scientific and Commercial Exhibit will be conducted on the Ball Room floor of the Book-Cadillac Hotel.

MEETING PLACES

All the Sessions, General Meetings, Registration and Exhibits will be located on the Ball Room Floor of the Book-Cadillac Hotel. The Registration Booth will be opened at 10:00 a. m., September 26th.

ENTERTAINMENT

No formal entertainment has been planned. Detroit offers independent features for those seeking diversion. Each day and evening is fully occupied by program features which the Scientific Committee feels are adjuncts to the following functions:

On Tuesday evening, the 25th, Dr. A. J. Cramp of the American Medical Associa-

tion, will deliver an address on Nostrums and Quackery before the Wayne County Medical Society at its auditorium in the Maccabees Building, corner Woodward and Putnam Avenues.

Following Dr. Cramp's address the society will tender open house to the delegates and members of the State Society in its club rooms on the 11th floor of the Maccabees Building.

In addition to this we would like the members of the State Society to feel free to avail themselves of the comforts and services in our club rooms and cafe.

On Thursday night following the Presidential Address there will be a reception dance in the Italian Gardens at the Book-Cadillac Hotel. All members and their wives and guests are cordially invited.

The Wayne County Medical Society is arranging for facilities for those members desiring to play golf at the Hawthorne Valley Golf Course. It is desirable that those wishing to play notify our secretary, 11th floor Maccabees Building that the proper number may be arranged for and complimentary cards issued.

Wayne County Medical Society.
E. C. Baumgarten, M. D.,
Chairman, Committee
on Arrangements.

FIRST GENERAL SESSION

Time: Thursday Evening, September 27th, 7:45 P. M.

Place: Main Ball Room.

7:45 P. M.

1. Call to Order, President H. E. Randall, Flint.
2. Invocation.
3. Welcome, E. G. Martin, M. D.,
President Wayne County Society.
4. Announcements, Secretary.
5. President Randall's Address—
"The Contribution of Medicine to Modern Civilization."
H. E. Randall, Flint.
6. Address, His Excellency, Fred R. Green,
Governor of Michigan.
7. Nominations for President.
8. General Business.

SECOND GENERAL SESSION

Time: Friday, September 28th, 11:45 A. M.

Place: Main Ball Room.

1. Call to Order.
2. Report of Nominating Committee.
3. Introduction of President Elect.
4. General Business.
5. Adjournment.

MOVING PICTURE DEMONSTRATION

Clinical Demonstrations

Thursday Afternoon—4:00 P. M.

Main Ball Room

The following reels of moving pictures will be shown:

1. Infections of the Hand.—Knavel.
2. Goitre Operation—Crile.
3. Intestinal Peristalsis—Alvarez.
4. Hernia—Webster.
5. Labor—De Lee.

SCIENTIFIC SECTIONS

PEDIATRICS

Chairman, R. M. Kempton, Saginaw.
Secretary, Wm. S. O'Donnell, Detroit.

THURSDAY MORNING SESSION

September 27th—9:00 A. M.

1. Thyrotoxicosis in Children—Dr. Hugo A Freund, Detroit.

A brief description of the histology of the normal thyroid at birth, in early childhood and during adolescence will be given. Illustrations of the earliest changes occurring in beginning colloid goiter in childhood will be shown. The histopathology of thyroids in children suffering from thyrotoxicosis will be demonstrated. Case histories and reviews of throtoxicosis together with metabolism studies and treatment will be presented.

2. The Treatment of Erysipelas with Erysipelas Streptococcus Antitoxin—Dr. John E. Gordon and Dr. D. C. Young, Detroit.

The severer cases of 256 erysipelas infections observed during 1927 were treated with the recently developed erysipelas streptococcus antitoxin. The serum exerts a favorable influence on the duration of the fever, toxemia and the period of incapacitation. The complications are not appreciably influenced.

3. The Etiology of Measles and Its Specific Treatment—Dr. N. S. Ferry, Detroit.

A review of the experiments carried out with the Streptococcus Morbilli isolated by Ferry and Fisher from the blood in early cases will be presented together with the experimental tests with measles toxin prepared from this organism and the recent clinical work with measles antitoxin obtained from horses immunized with measles toxin.

4. The Diagnosis and Treatment of Pyloric Stenosis—Dr. Grover C. Penberthy, Detroit.

This will include the analysis of a series of cases studied and operated upon at the Children's Hospital, a discussion of the differential diagnosis, medical management before and after operation, the operative procedure and the report of the final results in cases followed after leaving the hospital.

THURSDAY AFTERNOON SESSION

September 27th—1:30 P. M.

1. The Desirability of Seeing the Young Child as a Unit in Relation to Medical Diagnosis.

This paper is given through the cooperation of the Staff of the Merrill-Palmer School, Detroit: Dr. E. Lee Vincent, Dr. Rachel Stutsman, Dr. C. A. Wilson, Miss Winifred Rand, Miss Mary Sweeney, Miss Winifred Harley and Dr. Icie G. Macy. There will be a discussion and demonstration of the correlation of the mental, nutritional and educational findings regarding young normal children with the influence of the family relations and the significance and the interpretation of these in their relation to medical findings. This will also include the contributions of the biological chemistry laboratory to such case studies.

FRIDAY MORNING SESSION

September 28th—9:00 A. M.

1. The Role of Blood Transfusions in the Treatment of the Diseases of Children—Dr. Marsh W. Poole, Windsor, Ont.

Blood transfusion has become such a popular form of therapy in so many conditions encountered in infancy and childhood that its value is sometimes questioned. In this paper an attempt has been made to analyze the experience gained at the Children's Hospital, Detroit through a large series of transfusions.

2. The Study of the Active Immunization Against Scarlet Fever—Dr. Bernard B. Bernbaum, Detroit.

This study is a comparison of the active immunity against Scarlet Fever as shown by the Dick test produced by Larson's toxin and Dick's toxin. A group of children were Dick tested and the positive reactions were divided into two groups. One group was immunized with Larson's toxin and the second group was immunized with Dick's toxin. These two groups have been tested for immunity against scarlet fever for two years.

3. The Practical Methods of the Production of Active Immunity in Infectious Diseases—Dr. Roy W. Pryer, Lansing.

This paper considers primarily diphtheria toxin immunity as produced by diphtheria toxin-antitoxin mixture, diphtheria toxoid and purified diphtheria toxoid and ricinoleated diphtheria toxin, together with a brief review of the literature and a summary of the advantages and disadvantages of each method with the possibility of applying some of these methods to other tests as for instance in scarlet fever.

4. The X-Ray examination for Pulmonary Tuberculosis in Children—Dr. C. C. Birkelo, Detroit.

In the X-ray examination the tracheo-bronchial nodes are readily recognized and need not be guessed at when producing symptoms.

A tuberculous parenchymal infiltration has definite characteristics at all ages and the X-ray examination of the chest is just as valuable in the child as in the adult as regards the recognition of early tuberculosis.

FRIDAY AFTERNOON SESSION

September 28th—1:30 P. M.

- (a) Election of Chairman.

1. Encephalitis in Children—Dr. Thomas B. Cooley, Detroit.

This paper will discuss the increasing frequency of encephalitis in recent years, both the toxic and the infectious types. The difference of symptomatology in early life—epidemic and hemorrhagic encephalitis—encephalitic symptoms accompanying or following certain infections: pyelitis, measles, pertussis and influenza—lead encephalitis—the difficulties of differential diagnosis—the gravity of the sequelae, paralyzes, mental retardation or imbecility, character changes and epileptiform states—the prognosis and treatment.

2. Mongolian Idiocy—Dr. Thomas D. Gordon, Grand Rapids.

The comparison of the theories of etiology—"Exhaustion Products"—endocrine theory—Crookshank's anthropological or reversion theory. The most characteristic physical signs and mental traits in recent cases seen in practice. The difficulties encountered in securing admission to suitable schools. The advantages of commitment to an institution. The factors influencing prognosis as to life and as to future mental development.

3. Allergic Diseases in Children—Dr. Samuel J. Levin, Detroit.

The most frequent conditions found are eczema, asthma urticaria and hay fever. The importance of the more obscure conditions such as vague abdominal pains epilepsy and headache in relation to allergy are stressed. By means of the skin tests the diagnosis of the etiological factors can often be shown and specific treatment frequently instituted. In those cases in which the etiological factor cannot be shown, non-specific foreign protein therapy has been of value.

4. "Sensitization"—Dr. John P. Parsons, Ann Arbor.

5. Serum Reactions: The Sensitizing Effect of Previous Antitoxin and Toxin-antitoxin Administration—Dr. John E. Gordon.

Persons who previously have received toxin antitoxin mixtures react more frequently to serum injections in the treatment of diphtheria, scarlet fever and erysipelas than do control persons. The sensitizing effect of previous serum injections is definite but less marked than toxin antitoxin. The severity of serum reactions is largely governed by the degree of sensitization.

MEDICINE

Chairman, Dr. A. F. Jennings, Detroit.
Secretary, Dr. Wm. R. Vis, Grand Rapids.

Thursday, September 27th—9:00 A. M.

Symposium on Endocrinology

Chairman's Address—"Medical Experience in Hyperthyroidism."

Dr. A. F. Jennings, Detroit.

"Endocrines." Dr. C. J. Marinus, Detroit.

"Disturbance of Function Related to Emotional Conflicts."

Dr. Carl D. Camp, Professor of Neurology, University of Michigan.

"Obesity."

Dr. L. H. Newburgh, Professor of Medicine, University of Michigan.

"Hyperthyroidism: Recognition and Treatment."

Dr. Richard M. McKean and Dr. George E. McKean, Detroit.

September 27th—1:30 P. M.

"The Present Status of the Treatment of Asthma."

Dr. George L. Waldbott, Detroit.

"Healing Tuberculosis."

Dr. E. N. Nesbitt, Grand Rapids.

"Pulmonary Lobar Atelectasis."

Dr. V. M. Moore, Grand Rapids.

Subject to be announced—

Dr. Carl A. Hedblom, Professor of Surgery, University of Illinois.

"The Medical Treatment of Surgical Tuberculosis by Heliotherapy."

Dr. A. B. Olsen, Battle Creek Sanitarium.

"Electro-Cardiograms and Their Clinical Significance."

Dr. John L. Chester, Detroit.

"Partial Heart-Block in Upper Respiratory Infections."

Dr. Leslie P. Colvin, Henry Ford Hospital.

Friday, September 28th—9 A. M.

"The Why of Buttermilk Feeding: Demonstration."

Dr. Don H. Duffie, Central Lake.

"The Relation of Diet to Xanthoma."

Dr. C. C. Curtis, Department of Medicine, University of Michigan.

"On the Use of U-50 and U-100 Insulin in Diabetes."

Dr. C. L. Hess, Bay City.

"The Early and the Later Diagnosis of Diabetes—Which?"

Dr. Henry J. John, Cleveland Clinic.

"The Fundus Oculi in Cardio-Vascular Lesions."

Dr. George F. Suker, Professor of Ophthalmology, University of Illinois.

September 28th—1:30 P. M.

Election of Chairman and Secretary.

"The Management of Edema in Various Types of Circulatory Disturbances."

Dr. L. E. Verity, Battle Creek Sanitarium.

"Multiple Neuritis Due to Chronic Focal Infection."

Dr. Cecil Corley, Jackson.

"The Present Status of Gall-Bladder Diagnosis and Surgery."

Dr. F. C. Currier and Dr. Wm. R. Torgerson, Grand Rapids.

"Secondary Anemias."

Dr. C. C. Sturgis, Professor of Medicine, University of Michigan.

SURGERY

Chairman, Fred. A. Collier, Ann Arbor.
Secretary, F. J. O'Donnell, Alpena.

September 27th—9:00 A. M.

SYMPOSIUM ON THORACIC SURGERY

"Phrenectomy and Intra Pleural Pneumolysis."

Dr. Edward O'Brien, Detroit.

"Surgical Treatment of Pulmonary Cavitation."

Dr. F. S. Dolley, Los Angeles.

"Chronic Pulmonary Suppuration."

Dr. Wyman Whittemore, Boston.

"Surgical Treatment of Pulmonary Tuberculosis."

Dr. Carl A. Hedblom, Chicago.

Discussed by:

Dr. John Alexander, Ann Arbor.

Dr. A. W. Hudson, Detroit.

September 27th—1:30 P. M.

"Interrelation of Thyroid, Adrenals and Nervous System."

Dr. George Crile, Cleveland.

Discussed by:

Dr. C. D. Brooks, Detroit.

"Treatment of Vascular Lesions of the Extremities."

Dr. Arthur W. Allen, Boston.

"Treatment of Burns in Children."

Dr. E. C. Davidson, Detroit.

"Diagnosis of Brain Tumors."

Dr. A. S. Crawford, Detroit.

Discussed by:

Dr. Wm. J. Cassidy, Detroit.

Dr. Max M. Peet, Ann Arbor.

September 28th—9:00 A. M.

SYMPOSIUM ON TREATMENT OF FRACTURES

"Fractures of the Ankle."

Dr. Arche Hall, Detroit.

"Treatment of Common Dislocations."

Dr. John Hodgen, Grand Rapids.

"Fractures About the Elbow."

Dr. Grover C. Pemberthy, Detroit.

"Modern Treatment of Fractures."

Dr. Philip D. Wilson, Boston.

Discussed by:

Dr. J. G. R. Manwaring, Flint.

Dr. F. C. Kidder, Detroit.

Dr. Otto Lee Ricker, Cadillac.

Dr. A. H. Whittaker, Detroit.

September 28th—1:30 P. M.

Election of Chairman and Secretary.

"Comforts in Cancer."

Prof. F. N. G. Starr, Toronto.

"Bladder Paralysis, Its Etiology, Prognosis and Treatment."

Dr. R. E. Cumming, Detroit.

"Treatment of Pyelitis."

Dr. Carl Eberbach, Milwaukee.

"The Place of Pyelography in Diagnosis."

Dr. Edward Cathcart, Cleveland.

Discussed by:

Dr. Hugh Cabot, Ann Arbor.

Dr. H. W. Plaggemeyer, Detroit.

Dr. W. C. Cole, Detroit.

OPHTHALMOLOGY AND OTO-LARYNGOLOGY

Chairman, J. S. Wendel, Detroit.

Secretary, A. R. McKinney, Saginaw.

Thursday, September 27th—9:00 A. M.

9:00 A. M.—Chairman's Address,

J. S. Wendel, Detroit.

"Treatment of Traumatic and Acquired Facial Deformities."

Claire L. Straith, M. D., D. D. S.
Detroit, Michigan.

Frequency of Industrial injuries; motor accidents; fractures of facial bones; face lacerations, etc. Immediate treatment; subsequent treatment; illustrating scar removal, bone and cartilage grafts, etc. Deformities acquired by disease, congenital deformities, etc. Treatment—Lantern slide illustrations.

Discussion opened by:

Ferris N. Smith, M. D.,
Grand Rapids, Michigan.

"Management of Non-Inflammatory Glaucoma,"

Walter R. Parker, M. D.,
Detroit, Michigan.

Classification of Glaucoma as a means of determining method of treatment; classified according to character of anterior or posterior chamber.

Discussion opened by:

Geo. F. Suker, M. D., Chicago, Ill.

"The Frontal Bone and the Variations in Its Para Nasal Sinuses; also the Sphenoid Bone in Relation to the Variations in Its Sinuses."

Henry J. Prentiss, Professor of
Anatomy, University of Iowa,
Iowa City, Iowa.

Discussion opened by:

C. F. McClintic, M. D.,
Detroit, Michigan.

12:00 M. —Luncheon with round table discussion led by R. Bishop Canfield, M. D., Ann Arbor, Michigan.

2:30 P. M.—Demonstrations and operation of interesting cases at Harper Hospital by the members of the Ophthalmological and Oto-Laryngological staff.

Friday, September 28th—9:00 A. M.

9:00 A. M.—Election of Officers.

Subject to be announced.

C. F. McClintic, Detroit, Michigan.

"Some Unusual Retinal Changes in Nephritis and Hypertension."

Arthur J. Bedell, M.D., Albany, N.Y.

"Eye Findings in Certain Intracranial Complications."

Geo. F. Suker, M. D., Chicago, Ill.

12:00 M. —Luncheon with round table discussion led by Dr. Arthur J. Bedell.

2:30 P. M.—Demonstrations and presentation of interesting cases at Detroit Receiving Hospital. In charge of Dr. J. Milton Robb and members of staff.

GYNECOLOGY AND OBSTETRICS

Chairman, G. Van Amber Brown, Detroit.

Secretary, Harold Henderson, Detroit.

Thursday—September 27th

9:00 A. M.—"The Unrecognized Occiput Posterior Position."

Dr. H. E. Northrup, Highland Park.

9:30 A. M.—"The Management of Certain Obstetric Difficulties."

Dr. W. P. Tew, London, Canada,
University of Western Ontario.

10:00 A. M.—"Forceps vs. Version in the Management of Dystocia."

Dr. Harry Pearse, Detroit.

10:30 A. M.—"New Ideas Regarding Treatment of Abortion."

Dr. Basil L. Connelly, Detroit.

Afternoon

1:15 P. M.—Early Diagnosis of Uterine Cancer."

Dr. Frank C. Witter, Detroit.

2:00 P. M.—"Shall We Operate on Acute Pus Tubes."

Dr. Max Burnell, Flint.

2:30 P. M.—"Saving the Uterine Adnexa in Pyosalpinx Cases."

Dr. R. T. Morris, New York.

3:00 P. M.—"Fallopian Tube Sterility."

Dr. Alexander M. Campbell,
Grand Rapids.

Dr. J. Duane Miller Grand Rapids.

3:30 P. M.—"Comparative Results of Complete and Sub-total Hysterectomy."

Harry M. Nelson, Detroit.

Friday, September 28th

Election of Chairman and Secretary.

9:00 A. M.—"The Use of Lipiodol in Gynecological Diagnosis."

Dr. H. C. Cushman, Detroit.
Dr. E. R. Witwer, Detroit.

9:30 A. M.—"Cancer Problems."

Dr. Reuben Peterson, Ann Arbor.

10:00 A. M.—"Malpositions of the Pelvic Organs."

Dr. Emil D. Rothman, Detroit.

10:30 A. M.—"Treatment of Placenta Praevia."

Dr. James M. Pierce, Ann Arbor.

Afternoon

2:00 P. M.—Obstetrical and Gynecological Clinic
in the amphitheatre of Harper Hos-
pital.

Dr. George Kamperman.
Dr. Ward Seeley.
Dr. A. E. Catherwood.

HOUSE OF DELEGATES

Crystal Ball Room

Wednesday, September 26th

FIRST SESSION

10:30 A. M.

Speaker, Henry R. Carstens, Detroit.
Vice-Speaker, H. J. Pyle, Grand Rapids.
Secretary, F. C. Warnshuis, Grand Rapids.

Committee on Credentials:

C. M. Williams, Alpena.
J. C. Kenning, Wayne.
John T. Kaye, Menominee.

ORDER OF BUSINESS

1. Call to Order.
2. Report of Credentials Committee.
3. Speaker's Address—H. R. Carstens.
4. President's Address—H. E. Randall.
5. Annual Report of the Council—R. C. Stone.
6. Appointment of Reference Committees.
7. Election of Nominating Committee.

NOTE: No two members shall be from the
same Councilor Districts.

Duty of Nominating Committee:

- (a) Supervise Ballot for President.
- (b) Nominate:
 1. Four Vice Presidents.
 2. Delegates to A. M. A. and their Al-
ternates to succeed:
C. S. Gorsline.
J. D. Brook.
L. J. Hirschman.
 3. Designate place of next Annual
Meeting.
8. Reports of Committees:
Medical Education.
Hospital Survey.
Public Health.
Legislation.
Tuberculosis.
Venereal Prophylaxis.
Civic and Industrial Relations.
Nursing Education.
Medical History.
Legislative Commission.
Delegates to the A. M. A.
9. New Business and Resolutions.
10. Recess.

SECOND SESSION

2:30 P. M.

1. Roll Call.
2. Reports of Reference Committee.
3. Unfinished Business.
4. New Business.
5. Recess.

THIRD SESSION

7:30 P. M.

1. Roll Call.
2. Reports of Reference Committee.
3. Report of Nominating Committee.
4. Elections:
 - (a) Four Vice Presidents.
 - (b) Place of Annual Meeting.
 - (c) Councilors to succeed G. L. LeFevre and
Richard Burke.
 - (d) Speaker.
 - (e) Vice-Speaker.
 - (f) Delegates and Alternates to A. M. A.
5. Unfinished Business.
6. Adjournment.

DELEGATES TO ANNUAL MEETING

NOTE:—*Delegates* in Capitals, *Alternates* in
lower case type. Number opposite County
Society indicates paid membership.

Alpena—16

C. M. WILLIAMS
H. J. Burkholder

Northern Michigan Medical Society—Antrim,
Charlevoix, Emmet, Cheboygan—11

W. E. CHAPMAN
Don H. Duffie

Barry—10

B. C. SWIFT
A. W. Woodburne

Bay-Arenac-Iosco—59

D. T. SMITH
V. H. Dumond

Berrien—41

W. C. ELLET
R. H. Snowden

Branch—13

W. A. GRIFFITH
R. L. Wade

Calhoun—108

C. S. GORSLINE
GEORGE HAFFORD
W. L. Godfrey
W. F. Martin

Cass—7

Chippewa-Mackinac—15

G. A. CONRAD
F. H. Husband

Clinton—18

VERNON C. ABBOTT
W. B. McWilliams

Delta—21

A. L. LAING
J. K. Parish

Dickinson-Iron—14

C. W. WALKER
W. H. Alexander

Eaton—21

P. H. QUICK
S. A. Stealy

Genesee—119

C. F. MOLL
F. REEDER
W. H. WINCHESTER
M. S. Knapp
J. G. R. Manwaring
W. H. Marshall

Gogebic—21

W. ELLWOOD TEW
C. E. Stevens

Grand Traverse-Leelanau—23**Gratiot-Isabella-Clare—31**

C. F. DU BOIS
M. J. Budge

Hillsdale—22

C. T. BOWER
G. R. Hanke

Houghton-Baraga-Keweenaw—38

W. T. KING
Geo. L. MacWaldie

Huron—7**Ingham—79**

J. EARL McINTYRE
MILTON SHAW
O. H. Bruegel
Fred Huntley

Ionia-Montcalm—37

C. H. PEABODY
J. F. Pinkham

Jackson—62

CORWIN S. CLARKE
C. D. MUNRO
D. F. Kudner
W. L. Finton

Kalamazoo-Van Buren-Allegan—117

R. D. THOMPSON
D. J. SCHOLTEN
F. T. Andrews
L. E. Westcott

Kent—196

A. V. WENGER
G. H. SOUTHWICK
J. D. BROOK
H. J. PYLE
E. W. Schnoor
W. E. Wilson
J. S. Brotherhood
R. H. Spencer

Lapeer—20

H. B. ZEMMER
W. J. Kay

Lenawee—34

H. H. HAMMEL
R. G. B. Marsh

Luce—10

R. E. L. GIBSON
F. P. Bohn

Macomb—31

A. J. WARREN
W. H. Norton

Manistee—10

A. A. McKAY
H. D. Robinson

Marquette-Alger—37

Nels Robinson

Mason—11**Mecosta—14**

WM. T. DODGE
Glenn Grieve

Menominee—11

JOHN T. KAYE
Edward Sawbridge

Midland—7

JOSEPH H. SHERK
George S. Orth

Monroe—30

S. J. RUBLEY
M. A. Hunter

Muskegon—60

V. S. LAURIN
F. Garber, Sr.

Newaygo—10

P. DRUMMOND
B. F. Black

Oakland—101

N. B. COLVIN
H. A. SIBLEY
Leon Cobb
Robert Baker

Oceana—8

W. L. GRIFFIN
J. D. Buskirk

O. M. C. O. R. O.—(Otsego-Montmorency-Crawford-Oscoda-Roscommon-Ogemaw—7

C. R. KEYPORT
Frank E. Abbott

Ontonagon—5

C. F. WHITESHIELD
E. J. Evans

Ottawa—29

R. H. NICHOLS
S. L. DeWitt

Saginaw—66

J. T. SAMPLE
J. W. Hutchinson

Sanilac—7

D. MAC NAUGHTON
R. B. Mitchell

Schoolcraft—6

W. E. THOMPSON
G. A. Shaw

Shiawassee—29

C. A. CRANE
None elected

St. Clair—49

R. C. FRASER
W. P. Derck

St. Joseph—15

CHARLES MORRIS

Dale Weir

Tri-County—(Wexford-Kalkaska-Missaukee)—18

W. JOE SMITH

S. C. Moore

Tuscola—24

U. G. SPOHN

R. L. Dixon

Washtenaw—123

THERON S. LANGFORD

JAMES D. BRUCE

Frederick A. Collier

J. A. Wessinger

Wayne—1,294

E. C. BAUMGARTEN

ANDREW P. BIDDLE

JOHN L. CHESTER

JAMES H. DEMPSTER

HARRY F. DIBBLE

H. B. GARNER

L. J. HIRSCHMAN

FRANK A. KELLY

R. E. LOUCKS

J. A. McGARVAH

ROGER V. WALKER

GEORGE J. BAKER

GEORGE VAN AMBER BROWN

A. E. CATHERWOOD

J. C. KENNING

C. F. McCLINTIC

F. M. MEADER

FRANK J. SLADEN

C. D. BROOKS

WM. J. CASSIDY

WM. P. WOODWORTH

WM. S. REVENO

S. W. INSLEY

C. C. BIRKELO

W. N. BRALEY

E. D. SPALDING

R. C. ANDRIES

Wm. Donald

L. T. Henderson

Wm. J. Stapleton

Geo. E. McKean

Harry L. Clark

Douglas Donald

Bruce C. Lockwood

Walter J. Wilson

J. Edwin Watson

Bernard Bernbaum

Henry A. Luce

Geo. E. Frothingham

E. B. Richey

E. D. Rothman

Louis J. Gariepy

J. D. Curtis

Wm. R. McClure

L. J. Morand

B. H. Priborsky

A. O. Brown

Charles A. Wilson

D. S. Brachman

F. D. Royce

H. M. Malejan

F. C. Buesser

F. H. Cole

Jay M. Burgess

WOMAN'S AUXILIARY

The State Woman's Auxiliary will hold its Annual Meeting at 2:00 P. M., Thursday afternoon.

Mrs. Guy L. Kiefer, President.

Mrs. J. E. McIntyre, Secretary.

ENTERTAINMENT FOR LADIES

This function will be assumed by the members of the Wayne County Woman's Auxiliary.

EXHIBITS

Scientific—Two rooms have been set aside for scientific exhibits. They will be under the supervision of Doctors Davis and Evans.

Commercial Exhibits—The following firms will occupy space in the area allotted to Commercial Exhibits:

Cameron Electrical Company.

Medical Protective Company.

Swan-Meyers Company.

Kalak Company.

Laboratory Products.

Hanovia Company.

Maltine Company.

W. B. Saunders Company.

Horlicks Malted Milk.

Ingram Company.

Petrolagar.

Sharp and Smith.

Victor X-Ray Corporation.

J. F. Hartz Company.

C. V. Mosly Company.

Professional Underwriters' Corporation.

Kellogg Food Company.

Lactropon Company.

MATERNAL MORTALITY STUDY IN MICHIGAN—PRELIMINARY REPORT

GUY L. KIEFER, (Health Commissioner)

LANSING, MICHIGAN

Early in 1927 the Michigan Department of Health considered the advisability of making a study of all deaths in Michigan from causes connected with childbirth. Realizing that this study should not be undertaken without the co-operation of the Michigan State Medical Society, the Commissioner of Health conferred with the secretary and later with the Council of the Michigan State Medical Society. As a result of these conferences, a study of maternal deaths was begun by the Michigan Department of Health in co-operation with the State Medical Society in April, 1927, to cover a period of at least two years. The purpose of this study is threefold, as follows:

1. To furnish to the State Medical So-

ciety facts concerning maternal deaths, particularly as they refer to medical practice.

2. To make available additional information about maternal deaths in Michigan.

3. To make possible more intelligent efforts to lower maternal mortality in Michigan.

Following is a progress report of a study of 619 maternal deaths in Michigan beginning with deaths in July, 1926, and including all deaths studied up to July, 1928. The report is not inclusive, as not all deaths occurring during the two year period have been studied. Maternal deaths in Detroit are studied by a physician from the Detroit Department of Health, and all maternal deaths outside of Detroit are studied by a full time physician from the Michigan Department of Health. This co-operation from the Detroit Department of Health has made it possible for cases to be studied soon after the deaths occur, which is most desirable.

A visit is made by the two physicians engaged in the study, to each physician whose name appears on a maternal death certificate. Facts are obtained from the physician as to prenatal care given the patient, complications of pregnancy, intercurrent diseases, history of delivery, including technique of the attending physician, home or hospital care, history of previous pregnancies, accessibility of patient to physician or hospital, and a complete history of the circumstances related to the death. Study of deaths in hospitals includes visits to the hospitals where the deaths occurred, inspection of records of the cases, and additional data as to the type of obstetrical care offered by the hospital in question. In this way a complete picture is obtained of all the facts related to the death, directly or indirectly.

DEATHS BY AGE GROUPS

The first grouping of deaths is made according to age, and the table given below shows the loss of 439 mothers under 30 years of age among the 819 cases studied.

Under 20 years	78
20-24 years	166
25-29 years	195
30-34 years	159
35-39 years	156
40 and over	65
Total	819

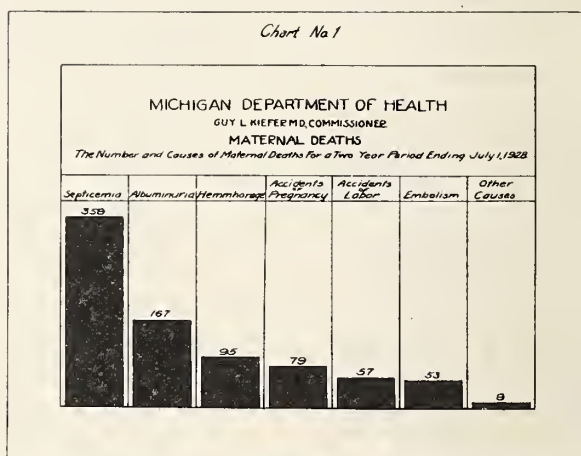
DEATHS BY CAUSE GROUPS

The deaths are grouped next by causes, with septicemia leading by a great ma-

pority and albuminuria and convulsions, the second largest group (Chart 1). These figures point to a need of intensive effort to reduce the number of deaths from these two causes, which are largely preventable.

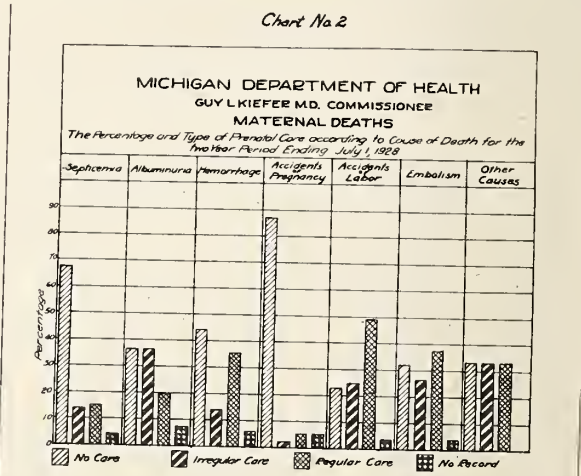
Puerperal Septicemia	359
Puerperal Albuminuria and Convulsions.....	167
Puerperal Hemorrhage	95
Accidents of Pregnancy	79
Accidents of Labor	57
Embolus, Sudden Death	53
Causes following childbirth (n. o. s.)*	9
Total	819

* Not otherwise stated.



PRENATAL CARE

An attempt has been made to check up on the amount and type of prenatal care received by these women (Chart 2). Where



no care was given during pregnancy, it has been so stated. Where the prenatal care was irregular or begun after the sixth month, it has been called irregular. Where it has been regular, throughout pregnancy, or begun not later than the sixth month and regular from then on, it has been called regular. A few cases had no record as to prenatal care. The chart on pre-

natal care illustrates clearly just the amount of prenatal care given in each cause group. The number of deaths of septicemia *receiving no prenatal care is particularly high*, due to deaths from abortion in this group (approximately 50 per cent); that is, deaths from septicemia following abortion. Of the entire group of 819 deaths, 447 *had no prenatal care*, 156 had irregular care, 175 had regular care, and 41 had no record whatever. The amount of prenatal care for the groups will be discussed in the special studies of some of the groups. Only 34 women out of the 819 deaths had a Wassermann test during pregnancy.

PRENATAL CARE FOR ENTIRE GROUP	
None	447
Irregular	156
Regular	175
No record	41
Total	819

ABORTIONS

There were 231 abortions in the entire group of deaths, the majority of them (181) being followed by septicemia, which was given as the cause of death on the death certificate.

HOSPITALIZATION	
A study was made as to the home or hospital care, and the results showed that 271 had home care, 432 received home care at first and were later removed to hospital, while in 115 cases the condition causing the death developed in the hospital and received hospital care only. In one case there was no record of home or hospital care. The hospitalization of cases is also included in the special studies discussed later.	
Home care	271
Home and hospital care	432
Hospital care	115
No record	1
Total	819

BIRTHS	
There were 318 live births (of 819 pregnancies), 163 stillbirths, and 338 pregnancies had no issue.	
Live births	318
Stillbirths	163
No issue	338
Total	819

DELIVERY

Normal deliveries occurred in 242 cases; operative deliveries occurred in 266 cases and of these 66 were Cesarean deliveries; there was no delivery in 304 cases, and no

record of delivery was obtained in 7 cases. Five cases were delivered by midwives and one by a neighbor.

Normal deliveries	242
Operative deliveries	266
No delivery	304
No record	7
Total	819

COMPLICATIONS

The greatest number of complications of pregnancy occurred in the group of deaths from albuminuria and convulsions. In the entire group of 819 puerperal deaths 122 cases had albuminuria, 84 convulsions, 73 high blood pressure, 106 edema, 33 prolonged headache, 39 pernicious vomiting of pregnancy, 71 bleeding during pregnancy; 112 of these cases had treatment during pregnancy for these complications. In 55 cases, complications were not recorded.

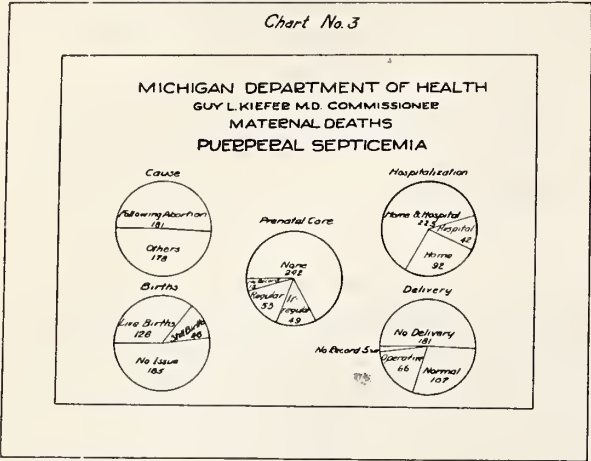
NUMBER OF PREGNANCY

There were 237 first pregnancies (of which a special study is given later), and one woman died in her 21st pregnancy. The following table shows the number of pregnancy for each case, as obtained from the maternal history.

Number of Pregnancy	
1	237
2	108
3	79
4	78
5	41
6	37
7	24
8	19
9	11
10	13
11	4
12	5
13	4
15	3
17	1
18	1
21	1
No record	153
Total	819

PUERPERAL SEPTICEMIA

A special study is submitted of deaths from puerperal septicemia, since this causes the greatest number of maternal deaths (Chart 3). The 359 deaths from septicemia fall into two groups: those following abortion, of which there were 181, and all other deaths from septicemia, of which there were 178. Of the 181 abortions, 111 were self-induced, 26 were induced by some one other than the mother herself (but not proven), 27 were spontaneous, 4 therapeutic, and in 13 the record was incomplete. The therapeutic



abortions were indicated because of toxemia, endocarditis, pernicious vomiting, and acute pyelonephritis. Thirty-nine of the abortion cases had hemorrhage, 55 had curettage, (not all instrumental, finger curettage in some cases), and 52 had temperature before curettage.

Of the 178 cases of septicemia not following abortion, 124 had vaginal examinations, and of these 80 had preparation for vaginal examination, 17 had no preparation, and 27 had no record of preparation (probably had none).

AGE GROUPS (Septicemia)

The age groups of deaths from septicemia are given below. A total of 215 of the 359 deaths from septicemia occurred in women under 30 years of age.

Under 20 years	33
20-24 years	87
25-29 years	95
30-34 years	69
35-39 years	53
40 and over	22
Total	359

PRENATAL CARE (Septicemia)

As would be expected, many of these cases of septicemia had no prenatal care whatever, both because of the large number of abortions, and because many of the deaths not following abortions occurred under poor home conditions (Chart 3). The following table shows the amount of prenatal care received by these women. Only 16 of the 359 had Wassermanns taken as part of prenatal care.

Prenatal Care (Septicemia)	
None	242
Irregular	49
Regular	53
No record	15
Total	359

HOSPITALIZATION (Septicemia)

The care received at the time of the development of septicemia is shown below (Chart 3). Ninety-two had home care only, 225 developed septicemia at home and received home care for a time, but were later removed to hospital, and 42 cases of septicemia developed in hospitals. There were 128 live births, 46 stillbirths, and 185 had no issue.

CARE	
Home care	92
Home and hospital care	225
Hospital care	42
Total	359

BIRTHS	
Libe births	128
Stillbirths	46
No issue	185
Total	359

DELIVERY (Septicemia)

Of the 359 deaths from septicemia, 181 had no delivery, 107 were normal deliveries, and 66 were operative (13 Cesarean). Five cases had no record of delivery.

DELIVERY (Septicemia)	
Normal	107
Operative	66
No delivery	181
No record	5
Total	359

NUMBER OF PREGNANCY (Septicemia)

There were 84 first pregnancies among the 359 deaths from septicemia. The table below shows the number of pregnancy of all cases of septicemia.

NUMBER OF PREGNANCY (Septicemia)	
1	84
2	42
3	34
4	32
5	19
6	12
7	10
8	8
9	6
10	4
11	1
12	2
13	1
15	1
17	1
No record	102
Total	359

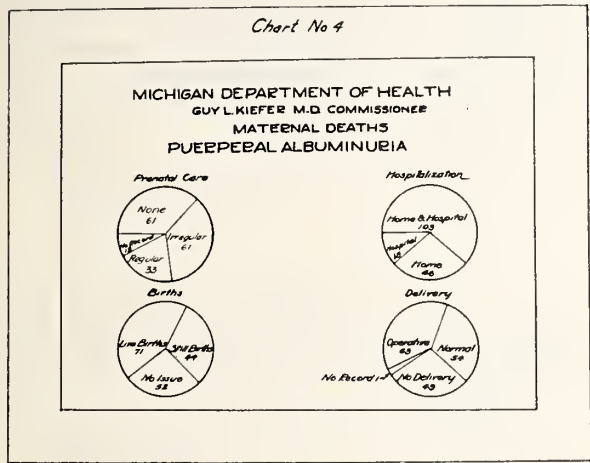
CONTRIBUTORY CAUSES (Septicemia)

The following contributory causes are of interest in considering deaths from septicemia: Operative deliveries preceded 66 deaths, abortions preceded 181 deaths; long labor, scarlet fever, hemorrhage, erysipelas, ruptured ectopic gestation, salpingitis, appendicitis, retained foetus,

intra-uterine manipulation and laceration at delivery, were also named as contributory causes.

PUERPERAL ALBUMINURIA AND CONVULSIONS

This cause was responsible for the second highest number of deaths (Chart 4).



It is significant to note that of these 167 deaths only 33 had regular prenatal care. One hundred and twenty-two had no care or only irregular care, while 12 had no record of prenatal care. In many of these cases, the doctor was first called when the patient was in convulsions, and the lack of prenatal care in many instances was due to indifference or ignorance on the part of the mother; in some instances, it was due to inaccessibility to doctor or hospital.

PRENATAL CARE (Puerperal Albuminuria and Convulsions)

None	61
Irregular	61
Regular	33
No record	12

Total 167

HOSPITALIZATION (Albuminuria and Convulsions)

The care of these women after the development of the condition causing death may be grouped as follows (Chart 4):

Home care	46
Home and hospital care	103
Hospital care	18

Total 167

BIRTHS (Albuminuria and Convulsions)

Of the 167 deaths from puerperal albuminuria and convulsions 71 were preceded by live births, 44 by stillbirths, and in 52 there was no issue (Chart 4).

Live births	71
Stillbirths	44
No issue	52

Total 167

DELIVERY (Albuminuria and Convulsions)

In this same group 54 had normal deliveries, 63 (24 Cesarean) had operative deliveries, and in 49 there were no deliveries; and there was no record of delivery in one case.

Normal deliveries	54
Operative deliveries	63
No delivery	49
No record	1

Total 167

COMPLICATIONS OF PREGNANCY (Albuminuria and Convulsions)

Complications were most frequent in this group. Ninety-two had albuminuria during pregnancy, 80 had convulsions, 57 had high blood pressure, 67 had edema, 29 had prolonged headache, 22 had pernicious vomiting, and 3 had bleeding. Seven cases had no record of complications. Only 61 of the 167 had any medical treatment of complications during pregnancy.

PUERPERAL HEMORRHAGE

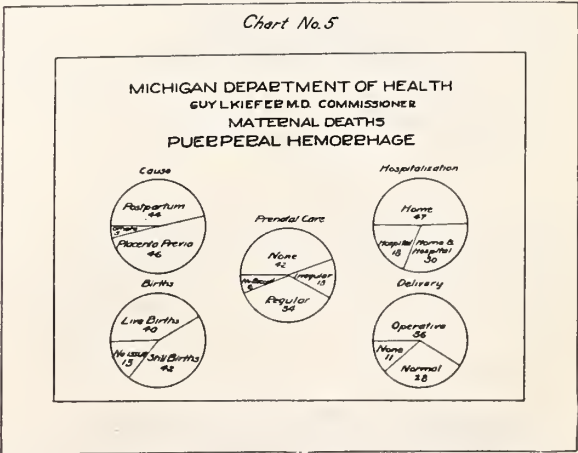
This condition caused the third highest number of deaths. Of the 95 deaths from puerperal hemorrhage, 46 were due to placenta previa, 44 were post partum hemorrhage, and 5 were due to other causes under puerperal hemorrhage.

Placenta Previa	46
Postpartum previa	46
Other causes under puerperal hemorrhage	5

Total 95

PRENATAL CARE (Puerperal Hemorrhage)

Of this group of puerperal hemorrhage deaths, 42 had no prenatal care, 13 had irregular care, and 34 had regular care (Chart 5). Six cases had no record of prenatal care.



None	42
Irregular	13
Regular	34
No record	6

Total 95

HOSPITALIZATION (Puerperal Hemorrhage)

Forty-seven of these 95 puerperal hemorrhage deaths had home care only, 30 had home care followed by hospital care, and 18 had hospital care only, as the condition developed in the hospital (Chart 5).

Home care	47
Home and hospital care	30
Hospital care	18
Total	95

BIRTHS (Puerperal Hemorrhage)

Forty of these deaths were preceded by live births, 42 by stillbirths and 13 had no issue (Chart 5).

Live births	40
Stillbirths	42
No issue	13
Total	95

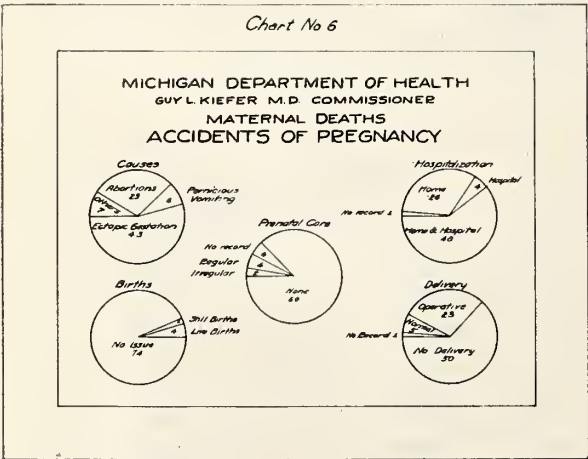
DELIVERY (Puerperal Hemorrhage)

Twenty-eight of the above cases had normal deliveries, 56 had operative deliveries and 11 had no delivery (Chart 5).

Normal	28
Operative	56
No delivery	11
Total	95

ACCIDENTS OF PREGNANCY

There were 79 deaths from this cause and of these 23 were due to abortions, 6 to pernicious vomiting of pregnancy, 43 to ectopic gestation, and 7 to other causes under Accidents of Pregnancy (Chart 6).



PRENATAL CARE (Accidents of Pregnancy)

Almost this entire group had no prenatal care since 69 of the 79 were without any medical supervision during pregnancy, 2 had irregular care, 4 had regular care, and in 4 there was no record of prenatal care (Chart 6).

None	69
Irregular	2
Regular	4
No record	4
Total	79

HOSPITALIZATION (Accidents of Pregnancy)

Home care only was given to 26 of the above group, 48 had home care followed by hospital care, 4 hospital care, and 1 had no record of care (Chart 6).

Home care	26
Home and hospital care	48
Hospital care	4
No record	1
Total	79

BIRTHS (Accidents of Pregnancy)

There were 4 live births, 1 stillbirth and 74 without issue of the 79 deaths from this cause (Chart 6).

Live births	4
Stillbirths	1
No issue	74
Total	79

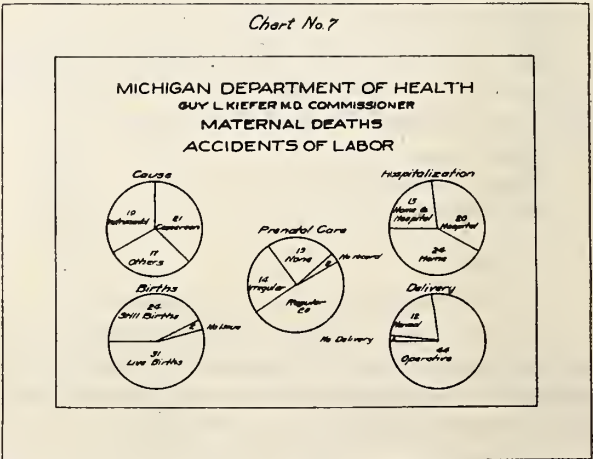
DELIVERY (Accidents of Pregnancy)

Five cases had normal delivery, 23 operative, in 50 there was no delivery, and in 1 no record of delivery. Most of the operative deliveries in this were due to ruptured ectopic gestation (Chart 6).

Normal	5
Operative	23
No delivery	50
No record	1
Total	79

ACCIDENTS OF LABOR

There were 57 deaths from accidents of labor, and of these 21 were Cesarean deliveries, 19 instrumental and other operative procedures, and 17 due to other causes



under accidents of labor, such as ruptured uterus, shock and so forth (Chart 7). It is interesting to note that 28 of these 57

cases had regular prenatal care, with deaths resulting in spite of such care. This is to be expected since prenatal care could not prevent the operative deliveries which were followed by so many deaths.

HOSPITALIZATION (Accidents of Labor)

Home care and hospital care were about evenly divided in this group as there were 24 cases which had home care, 20 which had hospital care, and only 13 which had home care followed by hospital care (Chart 7).

Home care	24
Home and hospital care	13
Hospital care	20
Total	57

BIRTHS (Accidents of Labor)

In this group of 57 accidents of labor, there were 31 live births, 24 stillbirths, and 2 cases with no issue (Chart 7).

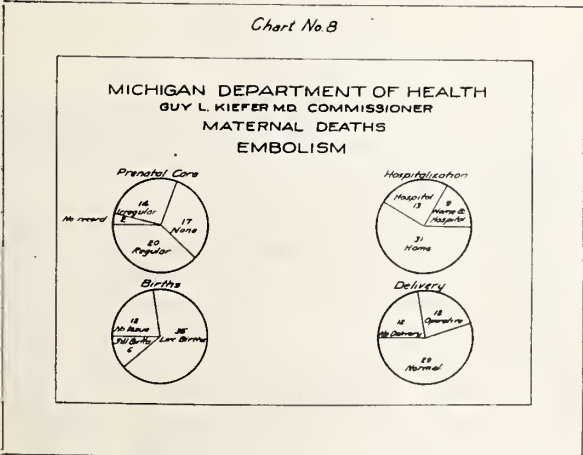
Live births	31
Stillbirths	24
No issue	2
Total	57

DELIVERY (Accidents of Labor)

Deliveries among these accidents of labor were as follows:

Normal	12
Operative	44
No delivery	1
Total	57

The large number of operative deliveries and the fact that 24 of the 57 were first pregnancies seem definitely related.



EMBOLUS, SUDDEN DEATH

There were 53 deaths from embolus and sudden death (Chart 8). Prenatal care probably has little effect on these cases so that the fact that of these, 17 had no prenatal care, 14 irregular, 20 regular, and 2 no record, probably has no great significance.

None	17
Irregular	14
Regular	20
No record	2
Total	53

HOSPITALIZATION (Embolus, Sudden Death)

Thirty-one of these 53 deaths were cared for at home, 9 had hospital care following some home care, and 13 had hospital care.

Home care	31
Home and hospital care	9
Hospital care	13
Total	53

BIRTHS (Embolus, Sudden Death)

Of the cases dying from embolus and sudden death 35 had live births, 6 stillbirths, and 12 had no issue.

Live births	35
Stillbirths	6
No issue	12
Total	53

DELIVERY (Embolus, Sudden Death)

Delivery in 29 cases was normal, in 12 operative, and in 12 there was no delivery.

Normal	29
Operative	12
No delivery	12
Total	53

CAUSES FOLLOWING CHILDBIRTH (N. O. S.)

There were 9 deaths from causes following childbirth. Of these, 3 had no prenatal care, 3 irregular care, and 3 regular care.

None	3
Irregular	3
Regular	3
Total	9

HOSPITALIZATION (Causes Following Childbirth)

Of the 9 deaths from causes following childbirth, 5 had home care, and 4 had home care followed by hospital care.

Home care	5
Home and hospital care	4
Total	9

BIRTHS (Causes Following Childbirth)

All of the 9 deaths from causes following childbirth were preceded by live births.

Live births	9
Stillbirths	0
No issue	0
Total	9

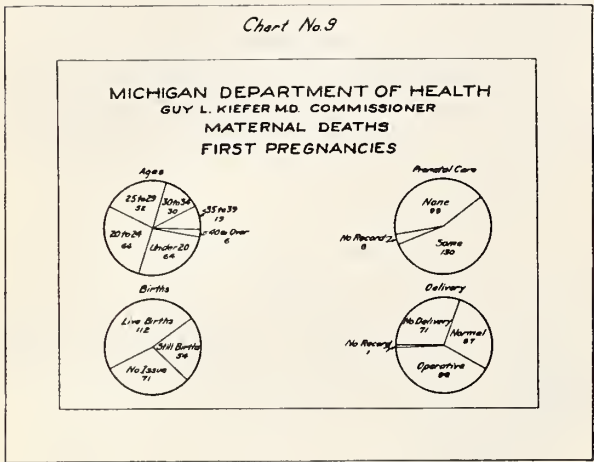
DELIVERY (Causes Following Childbirth)

Delivery in 7 cases was normal, and in 2 operative.

Normal	7
Operative	2
Total	9

FIRST PREGNANCIES

A group of 237 deaths from first pregnancies furnished some interesting mate-



rial (Chart 9). The following table shows the age groups of these first pregnancies:

	Acc. of Pregnancy	Puerperal Hemorrhage	Other Acc. of Labor	Puerperal Septicemia	Puerperal phlegmasia alba dolens	Puerperal Alb. and Convulsions	Causes following Childbirth	Total
Under 20 yrs.	2	3	6	23	5	25	0	65
20-24 yrs.	9	5	3	25	4	20	0	66
25-29 yrs.	6	4	6	20	4	10	2	52
30-34 yrs.	0	2	6	10	4	8	0	30
35-39 yrs.	5	3	2	4	3	12	0	19
40 and over	0	0	1	2	2	1	0	6
Total	22	17	24	84	22	66	2	237

The greatest number of first pregnancies died from septicemia, as there were 84 deaths from this cause. Next in number are puerperal albuminuria and convulsions with 66 deaths. Accidents of pregnancy caused 22 deaths, accidents of labor 24 deaths, embolus 22 deaths, puerperal hemorrhage 17 deaths, and causes connected with childbirth not otherwise stated, 2 deaths.

Puerperal septicemia	84
Puerperal albuminuria and convulsions	66
Accidents of pregnancy	22
Accidents of labor	24
Embolus, sudden death	22
Puerperal hemorrhage	17
Causes conected with childbirth not otherwise stated	2
Total	237

PRENATAL CARE (First Pregnancies)

Ninety-nine of the 237 first pregnancies had no prenatal care whatever, 130 had some prenatal care, including regular and irregular, and 8 had no record as to prenatal care. A total of 95 had measurements taken as part of prenatal care.

None	99
Regular or irregular	130
No record	8
Total	237

DELIVERY, BIRTHS AND CARE (First Pregnancies)

Of the deliveries, 67 were normal, 98 operative, 71 had no delivery, (30 were abortions) and 1 had no record of delivery. Sixty-six had home care, and 171 had hospital care. One hundred and twelve were live births, 54 were stillbirths, and 71 had no issue.

Normal deliveries	67
Operative deliveries	98
No deliveries	71
No record	1

Total	237
Live births	112
Still births	54
No issue	71

Total	237
Home care	66
Hospital care	171

Total	237
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From a public health viewpoint the outstanding facts brought out by this Study of Maternal Mortality in Michigan are the large number of deaths under 30 years of age, the inadequacy of prenatal care received by these mothers, the prominence of puerperal septicemia and albuminuria and convulsions (both largely preventable) as causes of deaths, and the large number of deaths from septicemia following abortion.

MEDICAL HISTORY

To the House of Delegates:
The complexion of the Committee on Medical History has changed during the year through the resignation of Dr. J. D. Brook and the appointment of Dr. W. H. Winchester.
Gratifying progress has been made in the work and a large amount of material assembled. With the hoped-for co-operation of collaborators the history can be placed in the hands of the printer early in 1929. Interesting correspondence concerning publication has taken place which, whatever the outcome, has been highly gratifying to the committee. Negotiations are not at this writing sufficiently far advanced to permit detail.
The name of Dr. James C. Willson of Flint is revered in this Society. His son, Mr. George C. Willson, has presented two handsome cuts to illustrate the history.

Presents of kodaks of Michigan scenes, his own photographing—have been made by Dr. Lucius H. Zeuch, compiler of the History of Medical Practice in Illinois.
Professor L. A. Chase, of Marquette, member of the Michigan Historical Commission, has been most helpful in suggestion, in contributing bio-

graphical material, and furnishing subjects for quaint illustrations.

Mr. H. M. Nimmo, publisher of the Detroit Saturday Night, has loaned a cut of "Cadillaqua."

Miss Evelyn Labinsky, editor of "The Quill" of Flint, has loaned a cut of "The Pioneer."

Dr. Geo. N. Fuller, secretary Michigan Historical Commission, has loaned two cuts.

Other than the above many illustrations have been provided, among them one of an Indian Mask, loaned by Mr. W. V. Smith of Flint.

Disbursements to date, \$358.49.

For the Committee,

Respectfully submitted,

C. B. Burr, Chairman.

REPORT OF THE COMMITTEE ON VENEREAL DISEASE PREVENTION

Because of the vast amount of suffering, physical inefficiency and mental degeneration to our citizens of this generation; the serious handicap placed upon the coming generation by the large number of degenerates resulting from syphilis as well as the loss of the unborn due to sterility from gonorrhea; and the large expense involved in the care of the mental and physical sequela of these infections, to say nothing of the great loss to industry and the welfare of our commonwealth—your committee senses the importance of its mission.

However, there exists in the minds of some that this committee is superfluous inasmuch as the Michigan Department of Health is maintaining a large staff for the control of venereal disease. This department has a corp of competent lecturers who are well equipped and active in the educational program. The state laboratories are rendering most valuable service to the doctors in diagnostic aids. Through the local health officer, treatment facilities are made possible to all those who cannot afford regular physician's services. A system has been developed to keep under control and treatment all infected cases until they are no longer capable of transmitting the disease.

It seems apparent that the State Department of Health is ably equipped to cope with this venereal disease problem, yet it is a fact that their efforts would be powerless without the aid and co-operation of the doctors individually and the organized medical profession.

Consequently, we consider it the big duty of this committee to call the attention of the members of the Society to the importance of sympathetic and conscientious co-operation with the entire program of the State Board of Health.

It is apparent that if every case of venereal disease now existing could be quarantined until cured or until past the contagious period that these diseases could be conquered and absolutely obliterated. They would terminate with those who are now infected and the next generation would be relieved of all such hazards.

We therefore urge every member of our society the fulfillment of his legal obligation to his state, his sacred duty to his fellowmen, and his moral duty to his own family to faithfully and conscientiously co-operate with the full program of the State Health Department in its warfare against venereal disease—the greatest scourge now existing to mankind.

Respectfully submitted,

W. M. MARTIN, M. D.
Chairman Venereal Disease Committee.

PUBLIC HEALTH COMMITTEE

The Public Health Committee of the Michigan State Medical Society wish to bring their report to you in the form of comments and suggestions relating to the general health conditions of Michigan for the past year.

We heartily endorse the research, educational, and public service work accomplished by the State Health Department under the able supervision of Dr. Guy L. Kiefer, and of other organizations which have worked and co-operated with the State Department of Health toward the same accomplishments. We especially commend the splendid work accomplished during the year on the prevention of spread of rabies, the free distribution of scarlet fever anti-toxin, and the research and elimination work of tuberculosis and contagious abortion in cattle by the Department of Agriculture and Department of Health. We also heartily endorse the campaign carried on in Detroit and other parts of Michigan on the elimination of quacks and other illegal practices of medical attention, the splendid co-operation of the press in health publicity throughout the state, and the general co-operation of all institutional forces and the general public in health work.

Inasmuch as in Hygeia, the profession has at its command, a wonderful means of educating the younger generation in matters of personal and public health, we recommend that each county society be urged, even at its own expense, if necessary, to place a copy of Hygeia in every school in their county every month of the school year.

We suggest a further and continued study and aid in the above factors; also we suggest and recommend: 1—That the county and local health units work in a closer relationship with the State Department of Health. 2—That further inspection be made of public swimming pools, public buildings, eating houses, and all other places where diseases may be spread. 3—That study and care of commercial and municipal waste in connection with sewage disposal, health work, and stream pollution be made. 4—That the carrying on of health and sanitary campaigns in public schools and communities be encouraged. 5—That the teaching of health work through all health associations and the public press be maintained.

Respectfully submitted,

R. C. MAHANEY,
Chairman Public Health Committee.

REPORT OF COMMITTEE ON TUBERCULOSIS

Your Committee on Tuberculosis have endeavored to co-operate with the various organizations working along this line; especially have we tried to assist the State Tuberculosis Society in their campaign to encourage physical examinations. Various talks pertaining to tuberculosis and health movements have been given before both lay and professional audiences.

It has been the endeavor of the committee to encourage the public to go to their physicians for examinations, rather than go to the public clinics unless they were so recommended by their physician or unable to pay a physician.

Also it has been hoped that the physician would take enough interest in this work to especially qualify himself for such examinations realizing that the battle against tuberculosis must be fought by the general practitioner rather than by

the specialist and clinics, at the same time not in any way depreciating the value of the latter.

B. A. SHEPARD, Chairman.

COMMITTEE ON MEDICAL EDUCATION

To the House of Delegates:

As there has been no material change in Undergraduate Medical Instruction during the year, the Committee on Medical Education will make no report this year to the House of Delegates; but reports progress.

Yours very truly,

ANDREW P. BIDDLE, Chairman.

REPORT OF COMMITTEE ON NURSING EDUCATION

To the House of Delegates,

Michigan State Medical Society:

1. Your Committee on Nursing Education begs leave to present the following report:

2. For some years there has been a feeling that nursing services are not entirely satisfactory. There seems to be an enlarging gap between physicians and nurses and patients. For the proper understanding of this situation it seems advisable to give a brief resume of the development of the nurse and, to show that a real problem exists, to quote freely from hospital superintendents, prominent physicians and prominent leaders of the nursing profession, all of whom speak with authority.

HISTORY

3. Since time began the solicitous care of a mother has been the basis of home nursing. Her instinctive desire to serve led her to give aid and comfort to those who suffer and until comparatively recently this was the only nursing. These services were at first limited to the family for the most part, but for centuries they have been given to neighbors, and those with more skill naturally gave more and became known as nurses.

4. Not a great while ago, as communities grew, there developed those who hired out to give such care to the ailing and then the "practical" nurse appeared. She apparently was sufficient for the needs of the day.

5. After the rise of scientific medicine and surgery, the care of the sick became complicated and exacting and it brought entirely new types of physicians, surgeons, hospitals and nurses. No longer could there be confidence in untrained and unscientific attendants.

6. In the hospitals the first nursing was done largely by convalescents and untaught hired women of a type made famous by "Sairy Gamp." These hired helpers gradually improved and received a better standing through the work and leadership of Florence Nightingale and others. A generation after her time there was a rapid development of modern hospitals in this country, because of a prosperity never reached elsewhere, and with it a new type of nurse was evolved, one who was highly trained for her work and without whom the advanced type of hospital we possess could hardly have functioned. These hospital trained nurses left the hospitals, because of their superior ability, to work outside and rapidly replaced the practical type to a large degree. The demands of modern medicine needed her in the home just as well as in the institution.

7. Institutions varied in the length of service required in this training and most of it was a rotation apprenticeship. At first instruction in class rooms was poorly organized and given largely as an accommodation by those with other more important duties. Improvements were made until a two year course was quite general throughout the country. At this time, in the late 90's, training schools were so numerous and so many students were needed to man the hospitals that they were graduated faster than they were needed in the home. Competition outside became too keen and because of this overcrowded field, hospitals were threatened with a future shortage of pupils and rather than hire graduates in large numbers, they lengthened the course to three years to help the hospital economically and not to fill the need for a three year nurse.

8. It will be noticed that up to this time nurses were developed to fill a need and their ability was just about what was required for each era in the art of caring for the sick. Hospitals gave such instruction only as was needed for this purpose and the hospitals decided what was to be given as determined by its experience. It will be noticed and should be emphasized that the function of the nurse was at all times to be an intermediate in making available to the patient such treatment as the physician's knowledge made desirable. She was in truth his agent.

CONTROL OF TRAINING TAKEN OVER BY NURSES

9. A change soon came and nurses were trained with less regard to an existing need than to an innate desire to be elevated from the status of a servant to that of a learned profession. This was a natural outcome, for as nurses became numerous they became articulate through the natural development of leaders and no longer could their demands be ignored in the handling of the problems of the sick. They demanded and obtained licensing boards composed in all or in part of nurses and then began the process of restricting their competition and advancing their standing by the boosting of requirements. They fixed on the degree of R. N. as the goal of their efforts, which no unlicensed nurse could tack on her name. Efforts have been made to limit nursing, by hired nurses, to these R.N.'s but so far unsuccessfully.

10. Then through their licensing boards they put pressure upon hospitals demanding changes and additions as they desired under threat of not licensing graduates if they did not conform. By persuasion and dictation they made all executives R.N.'s, put in some full time teachers, made standard our advanced elaborate curriculum, laid down the hours of work at the bedside, in study and in the class room, controlled living conditions, regulated entrance requirements and transfers to other schools and many other things, but not including in any of the demands listed by our own State Board any mention of the standard of care to be given patients.

11. Much of this is very sensible and not too much to ask, but gradually some doubts have arisen until one hospital superintendent has said:

12. "I think that hospital superintendents are commencing to get a little tired, a little weary of turning out every year hundreds and hundreds of young women with a diploma of their various schools and realizing in their own hearts that those young women are imitation physicians, are half-baked chemists, are almost cooks, and when the last is said and done, they are not anything very definite or final or very finished. I think we are tired of doing that. I know that

in my hospital where we have to go out and struggle to find ward supervisors, to find general duty nurses, there is this feeling, for we have to get them from all over the country. They think nothing at all of taking valuable material, gauze or linen or anything else and using it for dust cloths. They do not seem to realize that there is any question of finance in a hospital, that there is any question of personality or psychology which should come into hospitals. All those things are left out of the curriculum.

13. "I think we are a little tired of something else. A certain group of people will meet together, they will have a talk and they will think. They will change the curriculum, they will change the requirements for admission to the school. They will say they must have teachers with such and such qualifications and such and such education and the superintendent has to pay the bills. He cannot go on running a training school unless he complies with those regulations over which he has had no control and in regard to which his opinion has not been asked and he must go before his board of directors and justify the expense regardless of what it may be. I think we are tired and I think there are two things that the superintendents of hospitals, maintaining and conducting training schools want: The first is a little bit of peace from this question, so that we may take care of some of our other manifold duties, and, we are tired of taxation without representation." (1)

14. The object of a licensing system is to protect the public from an inferior or fraudulent service. When the public puts the power of granting licenses directly into the hands of those who are the recipients of this protective procedure, it opens the way to unwanted development in two ways: First it leads to an insidious but tremendous inducement to limit competition by making the requirements harder to meet and second, in a natural desire to amplify the esteem with which they are held, the recipients can side-step menial things and require an indulgence in scientific and cultural fields where the atmosphere is more to their desire. Human frailty should not be asked to withstand the seductive lure of such temptations.

THE FUTURE OF TRAINING

15. What may we expect in the future? This we can well judge by what the leaders are advocating and which they are making the desires of organized nursing. Some of these leaders may be quoted.

16. First they want to get training schools as far away as they can from control by physicians and, even in some ways, hospitals. The Michigan State League of Nursing Education asks:

"An endowed school with a separate faculty in the University of the same standing as the other faculties in the other schools in the University, chosen in the same way, with the same privileges and under the same rules in the University. A head of the school, a dean, the same as in the other schools of the University." (2)

17. One of the most prominent educators of nurses in this country says:

"The fact is that the modern doctor knows little more about the details of the nurse's work than the father of a family knows about the management of a household and the care of children. He knows what good nursing is and its results, but he is not skilled in the particular art. He prescribes it as he does massage, or diet, or drugs or dentistry, but that does not mean he himself is skilled in the art of massage, or dietetics, or pharmacy or dentistry. Why should he seek to control the education of the nurse any more than he does the education of the dietitian or social worker or dentist or occupational therapist who also co-operates with him in the treatment of the sick? The physician should be consulted about the nurse's training in so far as it touches on the treatment of disease, and should assist in the teaching of these branches that are distinctly medical in nature. We are always glad to have his point of view about the training of nurses, if it is based on a real understanding of our work. But the job of training nurses must be in the hands of nurses, just as the job of training teachers belongs to teachers. This idea is not new. It is the foundation stone on which Florence Nightingale based her whole system and wherever this rule has been departed from there has been failure." (3)

18. They want to abandon the apprenticeship

method of learning, which has been stated as follows:

"The utilization of pupils of schools for nurses in the routine ward care of patients is of doubtful propriety and value. The modern curriculum of nurse training will not permit the pupil a sufficient number of hours to give this service.

19. "Schools for nurses are becoming more didactic. The tendency of the curricula is away from the bedside—toward university training for the pupils of these schools. There is an inclination to evolve modified medical schools for nurse training. The pupil nurse will receive intensified academic instruction in medicine in centralized schools, preferably of university affiliation. Her clinical hospital bedside training would be secured by assignment, somewhat as the interne now receives his clinical training. It would be a training school for nurses with bedside clinical affiliation. It is plain that these plans do not contemplate or promise adequate bedside nursing to afford routine bedside ward care for our institutions." (4)

20. Nurses dub the present system of training an apprenticeship system and want to kill it, as:

"The school should be looked upon as an educational institution, as is any other vocational school, the hospital functioning in giving experience to nurses as to medical students. The school for nurses should not be considered on the part of the hospital as a means of cheap labor. If, because of financial difficulties, the school provides the only means by which the hospital can keep open its doors, then the hospital's obligation to the nurse includes awakening the public to its responsibility toward the institution and school (which exists in response to the public's need) and enlisting its support in providing means to establish properly equipped schools of nursing, thus making it possible for the nurse to be educated along modern lines rather than upon the modified apprenticeship system which still exists in many schools (a relic of ancient times) and which falls far short of a means of educating the nurse of today." (5)

21. A prominent English hospital superintendent comments as follows on the famous Rockefeller Report from which he first quotes:

"Gradually it has become apparent that the old system is a slow and cumbrous method of education; that it often has not even the virtues of a true apprenticeship wherein pupils work directly under the eye of a master. For in the hospital ward the immediate superior of the new student is the head nurse, responsible for the management of the ward unit, large or small, according to circumstances. Her duties are principally executive; as a teacher she is rarely equipped. With the best teaching equipment, she must in any case, after satisfying the imperative claims of ward management, have but the scantiest margin of time or attention available for the students. Often, indeed, she is herself a student learning administration, the practical running of a ward with its countless details as to supplies, assignment of nurses, household management, etc.

22. "The probationers' time is plainly misused in excessive ward work when they spend weeks in making surgical dressings for the hospital which they could learn to make in a week, or waste months in the diet kitchen preparing salads for private patients, cooking in quantity for the wards, or cleaning vegetables. Such time is worse than wasted, for the unreasonableness and monotony of such assignments naturally tend to chill the beginner's enthusiasm and responsiveness to the first flush of interest in her new career." (Quotation from Committee on Nursing—Rockefeller Report.)

23. One may say at once that cleaning vegetables and cooking for the wards is not done by the nurses in English hospitals, but by the kitchen or domestic staff, but there are many routine duties which must be carried out daily by nurses both while in training and in private practice; and routine is not only a valuable factor in education, but a most valuable assistance to intellectual development. One must be always thinking. In this connection it may be permissible to quote from Professor A. N. Whitehead, one of the most distinguished mathematicians and philosophers in England, who is shortly going to the University of Harvard as a Professor of Philosophy:

"It is a profoundly erroneous truism, repeated by all copy books and by eminent people when they are making speeches, that we should cultivate the habit of thinking what we are doing. The precise opposite is the case. Civilization advances by extending the number of important operations which we can perform without thinking of them. Operations of thought are like cavalry charges in a battle—they are strictly limited in number—they require fresh horses, and must be made only at decisive moments."

25. "This is an admirable apology for routine as an edu-

educational factor. Operations and services performed day after day throughout a period of three years become bone of one's bone, automatic but thoroughly accurate, reliable and unforgettable. To keep nurses learning new things every day without considerable intervals of routine will lead either to superficiality or to mental breakdown." (6)

26. They want to be "co-workers" and "consultants" with physicians and not servants or agents. They want to abandon their function as an intermediate between patient and physician and develop a field of their own. They state that nurses exist not for the doctor but for the patient; this is true, but not all the truth, as the doctor exists for the patient also. But the nurse's function is to act as a "go-between" and carry to the patient all those things whether great or small which medical knowledge would give him. They will admit that the field of medicine and nursing overlap "somewhat."

27. "How many have heard statements something like this? 'The nurse is the physician's assistant. She exists to carry out his orders. Therefore physicians should know what is the best kind of training for nurses and should control and direct that training.'"

28. "Let us see where the trouble lies in this familiar fallacy. In the first place I think it will be agreed that nurses exist, not for the service of the doctor but for the service of the patient and the public generally. The physician exists for the same purpose. Both are trying to make sick people well, to relieve suffering and to prevent disease. But they have different functions to perform. The doctor diagnoses and prescribes and gives some treatments himself. The nurse cares for the patient's needs, conserves his strength, nourishes him, observes his symptoms and carries out many of the treatments prescribed. Each occupies a different circle, and the circles overlap somewhat. Would it destroy the best kind of co-operation between doctor and nurse if we decided to call the nurse a 'partner' or a 'colleague' of the physician and treat her as such?" (3)

29. They want a higher standing, a broader education, a fuller life and then to do those menial things which the sick somehow seem to require, they want helpers in their schools. This order of beings may be allowed to practice as "trained attendants." Outside of the hospital these trained attendants must confine themselves to caring for those with minor ailments only, while the big and glorious cases are to be handled by the R.N's.

30. The well known Rockefeller report on Education of Nurses states:

"Steps should be taken through state legislation for the definition of licensure of a subsidiary grade of nursing service, the subsidiary type of worker to serve under practicing physicians in the care of mild and chronic illness and convalescence, and possibly to assist under the direction of the trained nurse in certain phases of hospital and visiting nursing."

31. This has been commented on as follows:

"The remedy suggested is that the hospitals to which training schools are attached should be staffed almost entirely by trained women and that the probationer nurses should enter the wards on much the same footing as medical students; to be taught, but not to do the work. And the trained nurses are to be relieved of most of their routine work by the introduction of a lower grade of nurse, or nursing worker, a child of Gibeon, who shall hew the wood and draw the water while the trained nurse does the really useful things." (6)

32. In fact the purely personal service which is a large part of the work needed to make a patient comfortable has become a bore to the nurse and she would have none of it as witness this from a training school leaflet:

33. "WHAT THE FUTURE HOLDS FOR THE REGISTERED NURSE.

34. "Nursing is one of the most useful and satisfying professions which any woman can enter.

35. "The most inspiring part of the work is the privilege of assisting in the wonderful results which are being accomplished by physicians and surgeons, and other leaders in the field of research and practical medicine. The nurse's work is an essential part of all these activities; and so she has a vital interest in every detail connected with them.

36. "As superintendent of a hospital, or a school of nursing, as head nurse in hospital wards or operating

rooms, as supervisor of dispensaries and clinics, there are always opportunities for rapid advancement.

37. "As a nurse instructor in schools of nursing and as an instructor in Red Cross courses in home care of the sick, the demand far exceeds the supply.

38. "As visiting, school, child-welfare, medical, social service and industrial nurse, there are unlimited opportunities." (8)

39. In all this there is no mention of caring for patients but hospitals are to give the requisite training for all this other stuff.

40. "For at least five years there has been increasing uneasiness among the medical profession and the public over the changing attitude of the nurse toward her vocation and her labor. There are now nurses engaged in public health work, social service, laboratory technic, mental investigation, dietetics, roentgenology, anesthesia, hospital management, teaching and many other positions. Too few nurses who enter the training school have their thoughts focused on the ideal of personal service to ailing humanity. Apparently nurses are being trained in technical matters, to a point at which dignity suffers when they are asked to undergo the tribulations of personal service. The modification of curriculums should tend to the development of more nurses who will consider the care of the sick their highest ideal." (9)

41. As a matter of fact since the trained nurse was born she has been found better fitted than all others for special occupations which too have developed as new fields in recent times. There have been certain advantages in the way of steady employment, fixed hours, lessened menial work and sometimes greater variety of action and less direct supervision in that they are not subject constantly to "orders". These fields are cited and used as lures to get girls to enter nursing by training school supervisors and they are just as attractive to lead them away from the bedside after graduation. Only marriage takes a greater toll among them.

42. A recent school bulletin giving information about the school has a page as follows:

"FIELDS FOR THE QUALIFIED NURSE

43. "INSTITUTIONAL WORK—As superintendent of a hospital or principal of a school of nursing, as head nurse in hospital wards or operating rooms, as supervisor of dispensaries and clinics, there are always opportunities for rapid advancement.

44. "EDUCATIONAL WORK—As teachers of health and hygiene in public and private schools, as director of health education in voluntary organizations, as nutritional workers with public health associations, the demand far exceeds the supply.

45. "PUBLIC HEALTH—As visiting, school, child welfare, medical social service, and industrial nurse, there are unlimited opportunities for full expression and use of all one's intellectual facilities, executive ability, and instinct of service, since public health nursing has become vitally important in the public health campaign.

46. "PRIVATE DUTY—As a private duty nurse, the scope for usefulness is boundless. Contact with the individual and the family and her service to them makes her a strong influence in the public health of the community.

47. "GOVERNMENT SERVICE—As an army, navy, federal public health or Red Cross nurse, a young woman may serve her country in peace and in war, at home and abroad. In the army a nurse has rank such as second lieutenant, first lieutenant, captain and major.

48. "MISSIONARY WORK—Home missions in Labrador, Alaska, the mountain regions of the south, and the Indian reservations need nurses. Foreign missions in China, India, the Near East and elsewhere call unceasingly for nurses.

49. "HOME LIFE—As a mother, wife, or sister, a nurse's course is the best possible foundation for a satisfactory family life."

50. Most of these fields require some special preparation and the hospital is expected to give this training also.

51. A nurse says:

"We must first consider the needs of the nurse—what she requires to fit her to carry out the duties which she will be expected to perform when she has been graduated from the school. There are these essentials: (1) She should be equipped to give efficient, intelligent bedside care to the sick; (2) She should have the knowledge and the desire to assist in teaching the prevention of disease; (3) She should have a foundation for any branch of the work which she may desire to follow; (4) She should be fitted to take her place as a useful citizen in the community. The obligation

of the hospital to the student nurse then would be to provide facilities for equipping the nurse to give the best possible service along these lines." (5)

52. The elaboration of the training of nurses has increased the cost of training them to the point where it is an expense not met by the value of the labor they render and has become a burden which constitutes one of the hospital's modern problems. They ask that it be made still more expensive by giving such a foundation as will fit her "for any branch of this work which she may desire to follow"!

53. It is no wonder that hospital superintendents are "a little weary" of being ordered to increase their burdens when many times they have to meet their already existing deficit by some form of begging.

54. This gives us the general drift of things to be expected in the future but where we will land cannot be foretold.

COMPLAINTS OF PRESENT NURSING SERVICE

55. The complaints made of the modern nurse and nursing education responsible for her are of two kinds, those in the hospital and those in the home. A hospital is a substitute for a home just as is a hotel. The hotel men understand this and usually cater to their guest's desires accordingly. They even post rules to the effect that, "The guest is always right." They pretend to let the guest rule as he does in his home and some hotels even do give a sense of comfort much like a home.

56. The hospital is used as a substitute for home because it has advantages that the home cannot have for the particular needs of those in distress. But there is a total loss of home atmosphere in modern hospitals excepting in some small ones. Sick folks are usually self-centered and sensitive and need careful handling.

57. The modern training school is a well organized institution which exists for the training of nurses and not for the care of patients. This is impressed upon one regularly. The ideal of service is possibly talked about but it is not lived up to excepting in some Sisters' hospitals where that spirit survives as a reproach to others. It is forgotten that we learn best by doing, and rendering service is best learned by giving it.

58. The pupils are younger and less considerate than formerly. This is shown in their noisiness, their mechanical performance of duties and their lessened humility when things are forgotten or mistakes are made. The little sympathetic touches which endear attendants to recipients are far too seldom given by these newer youngsters whose attention is not focused on personal service.

59. The atmosphere of an institution is always a reflection of its executives and their ideals; training schools are no exceptions. There is a tendency to militarize nursing establishments. No surer way has been invented of producing a cold-blooded routine individual! The present superintendent of nurses is a desk official, who sits in an office calling in this one and that, issuing orders while remote from the field.

60. A comparison in an institution observed in our own state can more readily show this great change.

61. Some years ago this place had as superintendent of nurses a woman who had the notion that hospitals existed for suffering human beings and that training schools existed to train nurses in the ways of relieving this suffering by the practice of the art until proficiency was obtained. She made her rounds daily, saw every patient at

least casually, and took particular notice of those who were most sick. She turned the typhoid and others to look for the telltale redness of too long pressure, she visited the nursery and looked at babies' bottoms for the redness of too infrequent changes, she followed up complaints personally and had a way of smoothing out troubles. She constantly drilled into the pupils that thorough and considerate attentions to the patients were important. She was not above showing a pupil how best to do some particular work. She taught classes and demonstrated technic. If she had an office and desk of her own it was not known. She spoke kindly and freely to her students, she was their best friend. To her they went from choice with their troubles, her nurses respected her and were up on their toes to please her which they knew they could best do by pleasing the patients. Her graduates boast of their training to this day and they were a joy to the physicians whom they assisted.

62. Now this same place, which has grown some, is a different institution. The superintendent of nurses has an office and a desk of her own. Here she sits all day long being very seldom seen on the floors. She forbids the nurses speaking to her when she is met in the halls unless she first speaks. One hour a week is given to pupils who want an interview with her. If the student feels that her need is urgent she must send in a written request for an appointment, stating the reason for her seeking an interview outside of the regular hour. If this reason is satisfactory she is sent a written notice of the appointed time to come to the office. If not she may not be answered or may get a denial of her request. The seniors and freshmen are ordered to have nothing to do with each other when off duty. A full time teacher in this place once boasted of the fact to her class that she was not interested in patients and did not care to know anything of them, her duty was teaching! Among other things she gave two whole hours to telling these young women about opsonins and allied bodies and quizzing about them.

63. This whole grotesque attitude is surely reflected in a most unmistakable manner when the patient is reached. This surely is not like home and those physicians who served in the late war will notice the familiar ear-marks of a systematic suppression of the individual. Such a place cannot turn out nurses whose first thought is consideration for their charges.

64. There is certainly a lessening of the ability on the part of nurses to adapt themselves to the patient's needs and to the home. Seldom can you find one now who in a pinch will help with the housework, help get the children off to school, do some of the cooking, etc., as did her predecessor. She stands aloof and must herself be served. Much of the mutual confidence of nurse and patient is gone as a result. She refuses to go to the country, to care for contagious cases, to do night duty, and many will not do private duty outside at all but seek hospital cases only. Of course a large percentage desert individual nursing entirely for some of the numerous allied fields open to nurses.

65. Evidently the nurse of a generation ago is going with the old-fashioned doctor to join the dodo.

66. The nurses' hours are as fixed as the phases of the moon. In doing twenty hour duty she must have her four hours off in the afternoon between one and five o'clock and no other time. If the recently delivered mother is advised

by her physician to get out afternoons for the air and sunshine she must get a "practical" nurse to care for the baby lest it be alone at these times. And even the anxious day after the delivery they must get away. If death approaches, the nurse is apt to suggest a relief rather than a day or two of longer service. Her hours must not be dislodged any more than the equinoxes. In the hospital when patients require more than an ordinary routine care the floor supervisor or students suggest to relatives that a "special" be employed. An extra effort is hardly to be considered. Rarely do they make the suggestion to the doctor first.

67. Twenty hour duty nurses, too, are going. Twelve hour duty is the vogue. No matter how easy the case and regardless of the fact that often twenty hour nurses are not disturbed all night, they will serve but twelve. If more care is needed it means two nurses, an entirely hopeless thing for many people.

68. And now a peculiar charge is to come. It is said that nurses are over educated. They are made to drink too deeply of the fountain of learning. This would seem to be an impossibility, yet observation shows that, whether it is the amount of learning or the manner of its acquisition, it is more difficult to get the desired service from the higher trained ones. Every physician has wondered at times if too much teaching away from the bedside was given at the expense of more desirable habits of application formed at the bedside. The tendency is to cut contact with the patients to the minimum.

69. One can view with amused sympathy the situation arising when one of the older non-progressive physicians has fallen afoul of an up-to-date super-nurse trained better than he in medicine. But does she give the patient enough more physical and mental comfort to pay for the stubborn resentment which meets her superciliousness?

70. This over-training has been commented on forcibly by others.

"Some of the criticism of the present nursing situation has been malignant and almost all of it has been non-constructive and ill formed. It has quite completely lost sight of the part the nurse has borne in the development of the practical medicine in its present stage, and of the part she is to bear in its future. The trained nurse made the modern hospital what it is and all the other activities that go on under its roof depend upon her faith and zeal for their success, and if it is to the hospital and its development that we look with hope for the future we cannot afford to ignore the conditions that made her what she is.

71. "When one considers the difficulties and hardships under which this was accomplished, how the nurses' training school of the modern hospital was built up brick by brick while all the time the heavy necessity of actually caring for the sick seemed to interfere with an orderly and scholarly instruction in so many things that a nurse ought to know; when one considers all this, and at the same time thinks of the splendid nurses that old chaotic lack of system turned out, one is inclined to wonder, and unless his faith in book-learning is Hebraic in intensity—inclined to doubt. It would be unfair to nursing and to medicine not to ask what was what in the tradition of nursing that was thus established and what is it that we fear may be lost.

72. "It seems to us: That nursing requires a spirit of service, that nursing is a craft, as is medicine, in which knowledge and skill combine. This spirit can only be transmitted by a fellow learner—in line of duty. Thus, discipline can only be learned by actual responsible labor. Thus, craft can only be learned by repeated trial and is not fixed until it has been passed on to another.

73. "Is it possible that we are right? Is it possible that a little pedagogy is a dangerous thing and that an adequate dose of the real substance would restore faith in the axiom that we learn to do by doing? Is it possible that nursing and medicine cannot be taught, but must be learned under the lash of responsibility? Is it possible that teaching may be increased and learning diminished and that this unhappy process may even be carried to such degree that the precious year of the novitiate in the discipline of nursing may be so attenuated as to be almost lost? Let us not turn backward. God forbid! But in our striving forward let us not lose the virtue of the past." (11)

74. Again:

"First and foremost—skill and intelligence in carrying out the treatment ordered, in contributing to the comfort of the patient in every particular, in detecting the early signs of an altered condition, threatened or impending, and a knowledge of the first aid steps to be taken to combat disaster. Also a habit of observing and recording concisely the daily progress. The training for this should be eminently practical, at the bedside and with the patients. Theoretical instruction should be used to explain only the nurse's problems, not the doctor's.

75. "I recently picked up a nurse's text book on pharmacology. I hastily put it down and passed on. I feared that I might be questioned about its contents and would display my ignorance. And so with bacteriology and pathology. I am told that a practical knowledge of bacteriology is necessary to the nurse if she is to understand the dangers of infection and transmission of contagion. And so an incubator is installed in the training school and pupil nurses watch the cultures grow, and peer into a microscope. And an autoclave is installed to teach sterilization! This might be utilized as a part of post-graduate training for those who take up operating room work. But for the rank and file the use of the fish boiler, the saucepan and the oven are of infinitely more importance.

76. "In my opinion training schools would be better served by cooking instructors with slight knowledge of dietetics, than by dietitians with slight knowledge of cooking. 'Knowledge is power' but 'a little knowledge is a dangerous thing.' A pseudo scientific veneer is not only a waste of time but there is great danger that the 'woods cannot be seen because of the trees.'"

77. "Thirty odd years ago, when I was resident in a small special hospital I had the privilege of being associated with a nurse just recently graduated from one of the large general hospitals. From her I was proud to learn many nursing duties such as the making of a bed, fixing the draw sheet, posturing for comfort, the compounding and proper method of applying a mustard paste, etc. Her duty, as she interpreted her calling, was first meticulous attention to the attending physician's orders; secondly, and of equal importance, considering the comfort and well being of the patient in every detail. For many years she has held an important supervising position in a large hospital. But she still considers as paramount the comfort of the individual patient. We call her the "ideal nurse." The influence of her example and devotion upon the pupil nurses under her control is beyond computation. Her ambition is to nurse—to care for the sick—and she does not allow accessories to cloud her vision." (12)

78. One hospital superintendent, commenting on the curriculum advised by the committee on nursing education of the Rockefeller Institute, says:

79. "On reading this through I feel like the Harvard student, who, after one of his courses of intensive study, was asked what he thought about it: "Well, Doc!" he said, "I feel just numb."

80. "As a curriculum for a woman doctor it is inadequate; for a nurse it is excessive and superfluous. The committee appears to look upon a nurse as a person to be trained to become a sort of doctor's assistant. This is not her function. Her duty is to carry out accurately the instructions of the doctor as to the nursing of the patient; it is not her duty to assist in treating the patient. The argument that she should be in a position to understand all that the doctor is doing and ordering is fallacious. To do so she would have to have a full medical education, and become a doctor herself.

81. "A curriculum such as that outlined, though it looks well on paper, will fail in practice. What the nurse will be taught will be beyond her powers to absorb in the time allotted, and she will only get a dangerous smattering of many subjects which she cannot master thoroughly. It is far better that she should accept a more modest program and learn it thoroughly." (6)

82. Another complaint is the rising cost of nursing. With the higher entrance requirements, the longer courses, and the elaborate training it is to be expected that the nurses' wages will go up. It creates difficulty when it is higher than the wage of the machine hand whose wife she is serving, and when she refuses twenty hour duty and gives but twelve it is impossible for him to employ her and her sister of a like mind. The super-nurse is becoming a luxury above the reach of many. The trained nurse must always get more than the type of untrained factory worker so much in demand now that he sets the wage scale for both male and female workers. A simple factory hand cannot expect to hire a nurse at a less wage than he gets or even the same.

83. That there is a need for just plain nurses is true and the hospital is the place for training this kind. The specialist should obtain her training by post-graduate instruction after a basic course of the routine, direct service type, for in no other manner can a patient's view point and problems be understood. Physicians feel that the dutiful nurse is disappearing. One famous physician thus voices his belief as to what nursing should be:

84. "After all, the private practice—the actual nursing care of the man, woman, or child is and must always be the first consideration. It is by such individual care that all our nursing schools and all our higher education shall be adjudged. The reputation of nursing as a service profession is in their hands. We may finally say that the aim and the object of nursing as a service profession is to create the actual nurse. By the actual nurse I mean the nurse who cares for and comforts and makes better the individual patient, be he rich or poor. For such is the service, after all, for which the profession was created and exists. It is a service profession."

RECOMMENDATIONS

85. Your committee respectfully suggests that the following principles be endorsed by the Michigan State Medical Society:

A. Nurses are helpers and agents of physicians' not "co-workers" or "colleagues."

B. Physicians should have a part in the direction of the training of nurses and in its limitations as should the hospitals which give the training.

C. The training of nurses should be simplified and the time of under-graduate training reduced to not more than two years.

D. If this shorter course turns out too many nurses, hospitals should employ more graduates instead of lengthening the course of training.

E. The only way to make the kind of nurse which is desired is by the routine giving of service under supervision, i.e., the apprenticeship system. This must be maintained.

F. The necessary training for the numerous special fields open to nurses should be obtained in post-graduate study at the expense of the nurse or our public educational system and not at the expense of the patient or the hospital.

G. To lessen the cost of nursing will be difficult. It can be helped some by:

1. The introduction of instruction in simple nursing technic in our public schools so that home nursing by members of the family and especially mothers can again be available to a greater degree in suitable cases.

2. The shortening of the present training course and pruning the curriculum of non-essentials.

3. The more frequent use of group and hourly nursing. These must always be of limited application.

4. The establishment of more hospitals and the more frequent use of them will help also. It is cheaper to patronize a hospital than a nurse in your home.

H. The power of licensing nurses should be put into the hands of a non-political board of educators with an advisory group of physicians and nurses.

Respectfully submitted,

Joint Committee on Nursing Education

J. G. R. MANWARING,
W. K. WEST,
F. C. WITTER,
FRANK W. GARBER,
C. E. BOYS,
Chairman

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Legislation: Elsewhere in this issue will be found the report of your Legislation Commission submitting a new qualification act and amendments to our present Medical Practice Law. Members are requested to carefully read this report and recommendations and delegates are requested to ascertain local opinions in order that intelligent action may be recorded.

House of Delegates: Speaker Carstens states that the House will be called to order at promptly 10:30 a. m. and that the official order of business will be observed with parliamentary precision.

County Society Activity: The prestige and influence of County Societies may be materially evidenced when interest in community welfare is demonstrated. The Kent County Medical Society has achieved a commendable piece of community activity in the effort of securing the adoption of a pure milk ordinance for Grand Rapids. We quote the following from a local paper,

indicative of a well directed piece of public service:

A HEALTH VICTORY

With its all-important raw milk sections un-amended, and a change made only in the radius within which pasteurizing plants may operate for sale to this city, the commission has passed after long discussion a milk ordinance promising genuine protection to residents of Grand Rapids.

That is creditable to the good judgment and foresight of the commission. In face of the long list of epidemics caused by weak regulation in other cities its members would have been accepting a very large responsibility in hamstringing this wholly reasonable and practical measure. No man of intelligence and good will desires to imperil the lives of children either for a political purpose or to bolster the business of a small minority producing under unsanitary conditions.

The great majority of dealers and producers favored these regulations, which had been sponsored by the Kent County Medical Society, were based on recommendations and tests of the federal and Michigan health services, and represented the minimum interference which would insure safety. The doctors, health officials and public spirited dealers and producers who have supported this measure throughout a long and tedious debate have placed themselves in the community's debt.

Politics: No—we suggest no urge as to what your personal ballot shall record. Vote—yes we urge that you exercise that right. In doing so suggest that you recall past records. Remember, too, that our present administration vouched to us the independence of our professional rights and closed the doors of short-cut aspirants. Furthermore, assurance is given us that our ideals will be an administrative program. Hence, the query is germane: "Why swap horses amid-stream?"

Invited Guests: The several sections have invited as speakers on their several programs the following distinguished guests:

Marsh W. Poole, Windsor, Ont.
Wm. P. Tew, London, Ont.
Robert T. Morris, New York City.
Henry J. Prentiss, Iowa City, Iowa.
Arthur J. Bedell, Albany, N. Y.
George F. Suker, Chicago.
F. S. Dolley, Los Angeles, Cal.
Wyman Whittemore, Boston
Carl A. Hedblom, Chicago.
George E. Crile, Cleveland.
Arthur W. Allen, Boston.
Philip D. Wilson, Boston.
F. N. G. Starr, Toronto, Ont.
Carl Eberbach, Milwaukee.
Edward Cathcart, Cleveland.
Henry J. John, Cleveland.

Annual Meeting: This issue contains the official program for our Annual Meet-

ing to be held in Detroit September 26-27-28. We suggest a careful reading of this program in order that you may gain its attractive features and obtain the urge to attend these instructive sectional meetings. We further suggest that you obtain your hotel reservations now.

Delegates: Delegates representing County Societies are urged to note that the first session of the House of Delegates convenes at 10:30 a. m. on September 26th. The Speaker has appointed a credentials committee that will be on duty at 9:30 a. m. Delegates' credentials have been mailed. These credentials are to be presented and approved by the credential committee before a delegate can be seated.

Committee Reports: By repeated writing we have obtained many of our committee reports which are published in this issue. Delegates are urged to read these reports so as to be familiar with them when they come up for action.

Registration: The Registration bureau will be opened on September 26th at 9:30 a. m. and continue through till 2:00 p. m. on September 28th. Every member is urged to register, receive the official badge and program.

Headquarters: The Book-Cadillac hotel is official headquarters where all our meeting will be held. A scientific exhibit and a commercial exhibit will be found on the ball room floor. All the section meetings will also be held on that floor.

CLINICAL CONFERENCES

Councilor Districts Post Graduate Conferences will be held in Fremont on August 30th. Regional clinics will be held in Grand Rapids, October 23-24th, Flint October 24-25th, and Jackson October 24th. The programs for these last three clinics will be announced in our October issue. As advance information we impart that Dr. M. L. Harris, president-elect of the A. M. A. will appear on the Flint and Grand Rapids programs.

Illegal Practitioners: We are informed that all violators of the Michigan Medical Practice act may be called to account if notices of infractions are filed with prosecuting attorneys. This information comes through reliable sources from the attorney general's office. The intimation is imparted that if any county prosecutor fails to prosecute when reliable information is presented the attorney general will com-

pel such action by the county prosecutor. Further, that the state police are available for securing evidence. Hence this suggestion that county societies through their officers or a committee call upon your local prosecuting attorney and request him to investigate and proceed against those against whom you file complaint.

Moving Pictures: On Thursday afternoon five subjects, goitre, infections of hand, hernia, intestinal peristalsis and confinement, will be shown through twelve reels of moving pictures. The program committee feels this will be a most entertaining and educational feature.

Scientific Exhibit: On the Ball Room floor Doctors Davis and Evans will show some interesting pathological and x-ray exhibits.

Medical Laws: This issue contains the proposed law and amendments submitted by our legislation commission. Please study them and advise your local delegates as to your views. The commission's report will be acted upon at our annual meeting.

Maternal Mortality: Among the committee reports to be found in this issue is a very important study of maternal mortality in Michigan. We suggest that every member become familiar with the results of this state survey.

SPECIAL MEETING OF THE COUNCIL

In response to the call, a special meeting of the Council of the Michigan State Medical Society was held in the Northwood hotel, Cadillac, on July 28, 1928.

Councilor Ricker of Cadillac, with the support of the local profession, entertained the Council at dinner at 6 p. m., at the new Northwood hotel, which was placed at the disposal of the Council two days previous to its formal opening.

Following the dinner, Chairman Stone called the meeting to order. All the Councilors were present, together with President Randall, Secretary Warnshuis and the members of the Legislative Commission.

Chairman Kiefer of the Legislative Commission submitted the draft of the proposed new act and amendment to the present Medical Practice Act governing the practice of medicine. See this issue for full draft of these proposed laws.

A two hour discussion of these laws were engaged in.

On motion of Charters-Heavenrich, the

Council approved the Committee's report and the act and amendments submitted in its report, it concurred in the recommendations made and recommended that the report be published in the Journal and transmitted to the House of Delegates.

On motion of Corbus-Greene, the Legislative Commission was directed to incorporate in its report an amendment to the practice act that would restrain itinerant and sojourning doctors from practicing in our resort regions.

On motion of Bruce-Cook, the Chairman of the Council was directed to appoint a Committee of three to investigate existing facilities for the hospitalization of mental cases and to report its findings and recommendations to the House of Delegates.

The Council reviewed and informally discussed several of the existing medical problems of our state and the trend of medical practices. It was deemed that these conditions might well be cited to the House of Delegates in the Council's annual report.

The Secretary reported upon the program and arrangements that were being supervised and executed in preparation for our September annual meeting.

The meeting adjourned at 11:45 p. m.

F. C. Warnshuis, Secretary.

MONROE COUNTY

Monroe County Society has followed its usual custom of adjourning for the summer.

Good news here is this: June 28, Monroe closed a drive raising \$206,000 plus for a fifty bed hospital to be maintained in Monroe by Sisters of St. Joseph, who have hospitals in Kalamazoo. Construction will start soon.

Yours respectfully,

Florence Ames, M. D., Secretary.

OAKLAND COUNTY

Thirty-five members of the Oakland County Medical Society attended the monthly dinner and meeting held Thursday at the Indianwood Golf and Country club. Members enjoyed golf in the afternoon and were later served dinner at the club, after which the meeting was held.

Dr. Grover C. Penberthy, associate professor of clinical surgery in the Detroit College of Medicine and Surgery, addressed the society, his topic being "Appendicitis in Children." Following his address, the discussion was led by Dr. Palmer E. Sutton of Royal Oak and Dr. Campbell Harvey of Pontiac.

In the golf tournament in the afternoon the first prize was won by Dr. E. V. Howlett of Pontiac and second low score was turned in by Dr. Fred Reid of Clawson. Consolation prize went to Dr. Karl Zinn of Pontiac.

SANILAC COUNTY

The Sanilac County Medical Society met August 21st at Hotel McDonald for the purpose of reorganization which was successfully carried out. The same officers held over until the December meeting.

Dr. Holdship and Dr. Healy of Huron County were present and discussed the feasibility of uniting Sanilac and Huron County Societies.

Dr. T. Heavenrich of Port Huron, 7th District Councillor, talked on a united meeting of Huron, Sanilac and St. Clair counties to be held on the lake shore in a short time.

After the adjournment of the meeting the physicians attended the Crippled Children's Clinic which was conducted by Dr. F. C. Kidner of Detroit.

At the banquet given by Doctors George, Evans and Martin Tweedie, the following physicians were present: D. D. McNaughton, Argyle; E. W. Caster, Yale; T. Heavenrich, Port Huron; E. Myer, Carsonville; J. Wallace, Elmer; W. B. Holdship, Ubley; L. E. Cochrane, Peck; J. E. Campbell, Brown City; R. G. Tuck, Brown City; Bruce Campbell, Detroit; S. A. Howard, Applegate; Charles S. Kennedy, Detroit; F. C. Kinder, Detroit; H. H. Learmont, Crosswell; N. J. McColl, Crosswell; G. Healy, Harbor Beach; R. B. Mitchell, Deckerville.

Interesting talks were heard from Doctors McNaughton, Heavenrich, Kidner and Kennedy.

A BILL TO AMEND SECTIONS, 1, 3, 4 AND 9 OF ACT NUMBER 237 OF THE PUBLIC ACTS OF 1899, AS AMENDED, ENTITLED, "AN ACT TO PROVIDE FOR THE EXAMINATION, REGULATION OF PHYSICIANS AND SURGEONS, AND FOR THE PUNISHMENT OF OFFENDERS AGAINST THIS ACT, AND TO REPEAL ACTS AND PARTS OF ACTS INCONSISTENT THEREWITH", BEING SECTIONS 6724, 6726, 6727, AND 6732, COMPILED LAWS OF 1915. AND TO ADD A NEW SECTION THERETO TO STAND AS SECTION 7 (a).

THE PEOPLE OF THE STATE OF MICHIGAN
ENACT:

Section 1. Sections 1, 3, 4 and 9 of Act number 237 of the Public Acts of 1899, as amended, entitled, "An act to provide for the examination, regulation, licensing and registration of physicians and surgeons, and for the punishment of acts inconsistent therewith", are hereby amended, and a new section to stand as section 7 (a) is hereby added thereto, said amended sections and new section to read as follows:

Section 1. The governor shall appoint, by and with the * * * consent of the senate, ten resident electors of the state, who shall constitute a board of registration in medicine. * * * The governor may select such appointees from the latest lists filed in his

office * * * *by the secretary of the Michigan State Medical Society*, such lists to contain at least treble the number of names as * * * *there are members to be appointed.* * * * All persons so appointed shall be legally registered physicians of this state, shall be graduates in good standing of reputable medical colleges, and shall have been actively engaged in the practice of medicine in this state for at least six years immediately preceding the time of such appointment. * * * *The present members of said board shall continue in office until the expiration of the terms for which they were appointed, and their successors shall be appointed for terms of four years each.* No member of said board shall belong to the faculty of any medical college or university. The governor shall also fill vacancies occasioned by death or otherwise, and may remove any member for the continued neglect of duties required by this act. Vacancies in said board shall be filled in accordance with the provisions of this act for the establishment of the original board, and a person appointed to fill a vacancy shall hold office during the unexpired term of the member whose place he fills. The business of said board shall be transacted by and receive the concurrent vote of from at least seven members.

Section 3. On and after the date of the taking effect of this act, all men and women who are not already legally registered under act number 237 of the public acts of 1899, and acts amendatory thereto, and who wish to begin the practice of medicine, surgery and midwifery in any of its branches, in this state, shall make application to the Board of Registration in Medicine, to be registered and for a certificate of registration. This registration and certificate shall be granted to such applicants as shall furnish satisfactory proofs of being at least twenty-one years of age, and of good moral and professional character, but only upon compliance with the following conditions contained in one or either of subdivisions one and two of this section; *Provided, That such applicants shall, in addition to complying with the requirements hereof, fully comply with any and all other conditions and requirements provided by law:*

First. The applicant shall be registered and given a certificate of registration if he or she shall satisfactorily pass an examination under the immediate authority and direction of the board upon the following subjects: Anatomy, histology and

embryology, physiology, chemistry and toxicology, bacteriology, pathology, diagnosis, hygiene and public health, medical jurisprudence, diseases of the eye, ear, nose and throat, obstetrics, gynecology and surgery, and such additional subjects made necessary by advances in medical education as the board may designate, said examination to be conducted as follows:

(a) The examination may be taken as a whole in all of the subjects as aforesaid, and shall be designated as the primary-final examination, or said examination may be divided into a primary examination, upon the subjects of anatomy, histology and embryology, physiology, chemistry and toxicology, and bacteriology, and a final examination upon the remaining subjects as aforesaid, not included in the primary examination;

(b) The applicant shall file with the secretary of the board, at least one week prior to an examination, an approved application, through a blank furnished by the board, covering the detail of his or her personal history, and preliminary and medical education, and such other evidence of qualification as the board may require;

(c) The board may make such rules and regulations governing the conduct of the examinations as it shall deem necessary, and wilful violation of such rules and regulations shall subject the applicant to the loss of the examination and fee;

(d) The examination shall be made as practical as possible in order to test the applicant's qualifications as a practitioner of medicine, the method of which shall be in accordance with the board's best judgment, and may be a written, clinical, laboratory or oral examination, or a combination of one or more of the above methods;

(e) An average percentage of at least seventy-five per cent of correct answers on all the subjects listed under this section, and of not less than fifty per cent on each subject, shall be required of every applicant: Provided, That in the case of a qualified applicant who has been in reputable and legal practice at least five years, at the discretion of the board, this requirement of minimum percentage may be modified by the board to meet the necessities of the individual case. An accepted applicant for the primary-final examination, or for the final examination, as noted in subdivision one (a) of this section, shall have a diploma from a legally incorporated, regularly established and recognized college of medicine within the states,

territories, districts and provinces of the United States, or within any foreign country, having as a minimum requirement a four years' course of eight months in each calendar year: * * * Students of medicine in regular attendance at a recognized medical college and endorsed by said board as having fulfilled the legal requirements of the state for entrance to, or matriculation in, recognized medical colleges, and who have completed, in accordance with the board's adopted minimum standard of medical college, through attendance and examination, and not prior to the termination of the second year in such institution, among others the subjects of anatomy, histology and embryology, physiology, chemistry and toxicology, and bacteriology, shall have the right to a primary examination, as recorded under subdivision, one (a) of this section, upon prescribed subjects, said examination to be held at such times and places as may be determined by the board, and to receive from the board a certificate showing the credits received in the several subjects upon which an examination shall have been had as aforesaid, and such credits obtained shall, at the election of the student, be included in and form a part of the examination heretofore called the final examination under subdivision one (a) of this section: Provided, That subsequent to graduation from a recognized medical college, in said final examination for a certificate of registration the applicant shall, if presenting said credits to the board at the time of his or her application for examination be examined only in those remaining subjects prescribed under subdivision first of this section and which have not been listed as subjects of aforesaid primary examination. The applicant shall pay to the board a fee of twenty-five dollars prior to the examination, divided as follows: Ten dollars for the primary examination, and fifteen dollars for the final examination. If such examinations are taken together, or as a whole, the fee shall be twenty-five dollars for such primary-final examination. No additional fee for registration shall be charged to those who successfully pass the examinations. The board shall, in the recognition of medical colleges, in its discretion, list such colleges in three or more classes or groups: Group one including those colleges which fulfill the advanced requirements of this act and which maintain the board's standards of preliminary and medical education; group two including those colleges

which have fulfilled the standard of medical education demanded by this state at the date of the diploma; and group three including those colleges whose courses are recognized only for advanced standing in recognized colleges listed under group one: Provided, That a diploma issued by a medical college listed by the board in one or more of the groups or classes as aforesaid, shall be recognized as a qualification under this act, in the event only of its representing the actual standards of preliminary and medical education within the provisions of this act. The board of registration in medicine shall, from time to time adopt minimum standards of preliminary and medical education, and no high school, academy, college, university or medical college, or other institution or board, shall be approved and designated or its diploma or certificate be recognized by said board under subdivision one of section three of this act, unless in the judgment of the board, it conforms with such standard.

Second. The applicant may, at the discretion of the board, be registered and given a certificate of registration if he or she shall present satisfactory proof of the possession of a certificate of registration or license which has been issued to said applicant within the states, territories, districts or provinces of the United States, or within any foreign country, where the requirements for the registration of said applicant at the date of his or her license shall be deemed by said board of registration in medicine to be equivalent to those of this act. The fee for registration from applicants of this class shall be fifty dollars, and for the endorsement of a certificate to another state five dollars;

Third. The board is authorized to issue a license or certificate of registration to any person who desires to practice a system of treatment of human ailments or diseases, and who does not in such treatment use drugs or medicine, internally or externally, or who does not practice surgery or midwifery, under the provisions of this act; Provided, * * * *That such applicant for such license or certificate shall have complied with any and all educational requirements which are now or hereafter may be required by law for license to practice the healing art in any of its branches*, and shall pass an examination before the board upon the following subjects: Anatomy, histology and embryology, physiology, chemistry, bacteriology, pathology, diagnosis, hygiene and public health. This examination shall be

concurrent with a ~~an~~ equivalent to the examination provided for practitioners of medicine under section 3, subdivision 1, of this act, and shall be in harmony with the provisions of this section and subdivision covering such examination in the subjects as above specified: Provided, however, That such examination shall be a continuous one and not subject to a division into a primary and a final examination. The fee for such examination shall be fifteen dollars. A practitioner under this subdivision shall not be permitted to use in any form the title of "doctor" or "professor" or any of their abbreviations, or any other sign or appellation to his or her name which would in any way designate him or her as a physician or surgeon qualified under the provisions of section 3, subdivisions 1 and 2 of this act, or in violation of the provisions of this act. All persons granted a certificate of registration or license under the provisions of this subdivision 3, shall also conform to the provisions of act number 237 of the Public Acts of 1899, and acts amendatory thereto, except as provided in this subdivision: Provided, That all practitioners described in section 3, part 3, who have been granted a diploma by a college incorporated for the purpose of teaching their method of treatment and who file with the state board of registration in medicine prior to October 1, 1913, an affidavit stating that they have practiced in the state of Michigan for a period of two years prior to September 1, 1913, shall be registered and authorized to practice without examination under the provisions of section 3, part 3, of this act. A fee of five dollars must accompany each application for registration under this provision;

Fourth. If any person shall unlawfully * * * *cause* himself or herself to be registered under this section, whether by false and untrue statements contained in his application to the board of registration of medicine, or by presenting to said board a false or untrue diploma, certificate or license, or one fraudulently obtained, he shall be deemed guilty of a felony, and upon conviction thereof shall be punished by a fine of not less than three hundred dollars nor more than five hundred dollars, or by imprisonment at hard labor for not less than one year nor more than three years, or both, at the discretion of the court, and shall forfeit all rights and privileges obtained or conferred upon him by virtue of such registration;

Fifth. Any person who shall swear

falsely in any affidavit or oral testimony made or given by virtue of the provisions of this act, or the regulations of the board of registration of medicine, shall be deemed guilty of perjury, and, upon conviction thereof, shall be subject to all the pains and penalties of perjury;

Sixth. The board of registration of medicine may refuse to issue *and/or* * * * *make, revoke or suspend* a certificate of registration or license provided for in this section, to any person *found by a majority of said board* to be guilty of grossly unprofessional and dishonest conduct. *Provided, That the board shall refuse to issue or revoke any such certificate until reasonable notice of such refusal or intention to revoke or suspend shall have been given to the applicant therefor or holder thereof, together with a notice of the specific charges against him and the time and place of hearing thereof.* The words "unprofessional and dishonest conduct", as used in this act, are hereby declared to mean:

(a) The procuring, aiding or abetting in procuring a criminal abortion;

(b) The obtaining of any fee on the assurance that an incurable disease can be permanently cured;

(c) The wilfully betraying of a professional secret;

(d) All advertising of medical business in which grossly improbable statements are made, or where specific mention is made in such advertisements of venereal diseases or diseases of the genito-urinary organs;

(e) Having professional connection with, or lending one's name to an illegal practitioner of medicine; or having professional connection with any person or any firm or corporation who advertises contrary to the provisions of this section, or with any person who has been convicted in a court of competent jurisdiction under the provisions of this section;

(f) All advertising, of any nature or kind, of any medicine, or of any means for the regulation or re-establishment of the menses;

(g) All advertising of any matter of any obscene or offensive nature derogatory to good morals or contrary to act number 62 of the Public Acts of 1911;

(h) Employing or being employed by any capper, solicitor or drummer for the purpose of securing patients; or subsidizing any hotel or boarding house with a like purpose, or paying, or offering to any person, money or any other thing of value with a like purpose, or advertising to do

so in any form whatsoever; or the division of fees in a consultation or a reference of a patient to a specialist, when no actual professional service is rendered by the physician referring the case, without the knowledge of the patient or the person concerned in the payment thereof;

(i) Being guilty of offenses involving moral turpitude, habitual intemperance, or being habitually addicted to the use of morphine, opium, cocaine, or other drugs having a similar effect; or of prescribing or giving away any substance or compound containing alcohol or drug for other than legal and legitimate therapeutic purposes;

Seventh. It shall be a misdemeanor for any person to be guilty of "unprofessional and dishonest conduct" as defined in this act. Any person who has been issued a certificate of registration or license under this act, and who shall be charged with the commission of such misdemeanor, shall be tried in a court of competent criminal jurisdiction, and upon conviction thereof shall be fined for each offense not to exceed two hundred and fifty dollars, or shall be imprisoned in the county jail not to exceed three months, or may be both fined and imprisoned, in the discretion of the court. The creation of such misdemeanor by this act shall not be construed to supersede any existing remedy or punishment, whether civil or criminal, for any act embraced within the provisions of this act, but shall be construed to be in addition thereto.

In addition to the provisions hereinbefore provided for the refusal to issue, revocation or suspension of a license or certificate, the board of registration in medicine may, upon the filing with it of a duly certified copy of a final conviction obtained in accordance with the provisions of this act, revoke or suspend for a limited period, not less than six months, the certificate or license of the person so convicted. The said board of registration in medicine may also revoke any certificate of registration or license of any person guilty of a criminal offense created by or embraced within the provisions of this act, or within the provisions of any state, provincial, territorial or federal act in the United States or in foreign countries, when such criminal offense or such fraud or perjury shall have been legally established in a court of competent jurisdiction. Said board may also revoke any certificate of registration or license heretofore or hereafter granted upon mistake of material fact or by rea-

son of fraudulent misrepresentation of fact by such applicant. Any person charged with a violation of the provisions of this subdivision 7 of section 3 shall have a fair hearing before the board, upon sufficient notice of such hearing: Provided, That this section shall not apply to such forms of contract practice as are from time to time endorsed by this board.

Section 4. The person receiving a certificate of registration shall file the same, or a certified copy thereof, with the county clerk in * * * each county * * * where he practices, and said clerk shall file said certificate or the certified copy thereof, and enter a proper memorandum thereof in a book to be provided and kept for that purpose, and may collect therefor a fee of fifty cents for each certificate or copy thus filed. And said county clerk shall, on the first day of each month, furnish to the secretary of said board a list of all certificates filed in his office during the preceding month on a blank provided for that purpose, and upon notice to him of the change of location or death of a person granted a certificate, or upon the revocation of the certificate granted such person, said county clerk shall enter at the appropriate places in the record so kept by him a memorandum of said facts; so that the record so kept by said county clerk shall correspond with the records of said board, so kept by the secretary thereof. In case a person having thus filed a certificate shall move into another county of the state, he shall procure from said county clerk a certified copy of said certificate, and file the same with the said county clerk of the county to which he shall so remove. Said county clerk shall file and enter the same with like effect, as if the same was the original certificate.

Section 7 (a). *The attorney general, prosecuting attorney, board of registration in medicine, or any citizen of any county, where any person shall engage in the practice of medicine, chiropractic, or drugless healing as provided herein, without first having obtained a license so to do, may maintain a suit in the name of the people of the state of Michigan in the circuit court in chancery of the county in which any such person shall engage in practice to enjoin such person engaging in such practice until he shall secure the license or certificate provided for herein. And any person who has been so enjoined who shall violate such injunction shall be punished for contempt of court provided that the institution of such proceedings*

shall not relieve such person so practicing without a license or certificate from a criminal prosecution therefor as provided by law but such remedy by injunction shall be in addition to any remedy now provided for the criminal prosecution of such offender.

Section 9. Any person who shall append the letters "M. D." or "M. B." or other letters in a medical sense, or shall prefix the title "doctor" or its abbreviation, or any sign or application in a medical sense, to his or her name, or who shall own or operate an institution where treatments for human ailments are given without being given under the full direction of registered physicians and nurses, it shall be prima facie evidence of practicing medicine within the meaning of this act. In this act, unless otherwise provided, the term "practice of medicine" shall mean the actual diagnosing, curing or relieving in any degree, or professing or attempting to diagnose, treat, cure or relieve any human disease, ailment, defect, or complaint, whether of physical or mental origin, by attendance or by advice, or by prescribing or furnishing any drug, medicine, appliance, manipulation or method, or by any therapeutic agent whatsoever.

A BILL TO PRESCRIBE THE EDUCATIONAL QUALIFICATIONS OF APPLICANTS FOR LICENSE TO PRACTICE THE HEALING ART, AS DEFINED HEREIN; TO CREATE A BOARD OF PROFESSIONAL REGISTRATION, AND TO DEFINE THE POWERS AND DUTIES THEREOF; AND TO PRESCRIBE PENALTIES FOR VIOLATIONS OF THE PROVISIONS HEREOF.

THE PEOPLE OF THE STATE OF MICHIGAN
ENACT:

Section 1. A Board of Professional Registration to consist of nine members is hereby created to carry out the provisions of this act. The members of said board shall be appointed by the governor within thirty days from the effective date of this act, and shall be chosen from teachers or professorial rank at any university or college in this state authorized by law to confer the Bachelor of Science, Bachelor of Arts, Master of Science or Master of Arts degrees, except those schools or colleges known as normal schools or normal colleges. Three members of said board shall serve for a term expiring the first day of July, 1931; three members of said

board shall serve for a term expiring the first day of July, 1932; and three members of said board shall serve for a term expiring the first day of July, 1933, and upon the expiration of the terms of each of such members, the governor shall appoint their successors for terms of six years. The governor shall have the power to fill any vacancy on said board, and the person appointed to fill any vacancy shall serve for the unexpired term of the office vacated.

Section 2. The members of the Board of Professional Registration shall, within two weeks after their appointment, meet at the state capitol at Lansing, and shall then elect a president and secretary from their own members, said officers to hold office for a period of one year or until their successors are elected. The secretary shall execute and file with the secretary of state a bond running to the state of Michigan in the penal sum of five thousand dollars, with sufficient sureties, to be approved by the governor, for the faithful discharge of his duties. Said board shall meet at such times and places as shall be determined by said board for the purpose of conducting the examinations hereinafter provided for, and for the purpose of any and all other business to come before said board. Not less than six members shall constitute a quorum of said board for the transaction of business: Provided, That any action taken by said board shall require the affirmative vote of five members thereof. The members of said board shall receive as compensation not to exceed ten dollars per day for each day said members shall attend the active session of said board, and their necessary traveling expenses incident to the performance of their duties hereunder: Provided, That the secretary of said board shall receive a salary of eighteen hundred dollars annually, to be paid at the time and in the manner as salaries of state officers and employees are paid.

Section 3. The term "art and science of healing" as used herein, shall mean to examine into the fact, condition or cause of human health or disease, or to treat, operate, or advise for the same, or to undertake, offer, advertise, announce or hold out in any manner to do any of said act, for compensation, direct or indirect, or in the expectation of compensation: Provided, That nothing in this act shall apply to applications for a license to practice dentistry, optometry, chiropody, nor to those persons seeking a license to confine their ministrations to the sick or afflicted,

as nurses, nor to those who administer to the sick or afflicted by means of prayer.

Section 4. On and after the effective date of this act, all persons who are not the holders of legal licenses to practice the art and science of healing, shall before making application to any board of registration having the power to issue licenses to practice the art and science of healing in any of its branches, secure from the Board of Professional Registration the following certificates:

(a) A certificate issued by said board and signed by its president and secretary, that such person has satisfactorily completed a four years' high school course, or equivalent high school credits.

(b) A certificate issued by said board and signed by its president and secretary that said person has secured sixty hours of collegiate credit as hereinafter specified and has satisfactorily passed the examination before said board, if, in the opinion of said board, such examination shall be necessary. No Board of Registration or examination having power to issue licenses to practice the art of science of healing, in any of its branches, shall accept for examination any person who is not the holder of the certificates specified in this section.

Section 5. In order to secure from said board the certificate specified in subdivision (a) of section 4 hereof, each person shall fill out a blank to be provided by the board for such purpose, upon which shall appear the name of the applicant, place and time of birth, nationality, name, place and time of attending the high school or schools, a list of credit units secured, and such other information as the board shall require, which blank shall be signed by the applicant and by the superintendent or principal of the high school attended. Upon receipt of such blank properly signed, the Board of Registration shall examine the same and if such high school credits equal a total of fifteen units, and said school or schools in which said credits were secured are on the approved list of the North Central Association of Colleges and Secondary Schools, or schools of equal rank therewith, said board shall issue to the applicant the certificate specified in subdivision (a) of section 4 hereof. Every application for such certificate shall be accompanied by a fee of one dollar.

Section 6. In order to secure from said board the certificate specified in subdivision (b) of section 4 hereof, each applicant shall fill out a blank to be provided by

said board, upon which shall appear the name of the applicant, time and place of birth, nationality, name of college, university or school attended and time of attendance, together with a list of college credits secured, which shall include English language, (grammar, rhetoric and English literature) six hours; biology, botany, zoology, general biology, eight hours; chemistry (inorganic, qualitative analysis, quantitative analysis, organic) eight hours; physics, eight hours; modern language (French or German or both) six hours; and such other information as the board shall direct. Said blank shall be signed by the applicant and by the proper college officers having knowledge of the facts therein contained, and shall be forwarded to the Board of Professional Registration, together with an examination fee of ten dollars, not less than ten days prior to the time of holding the examination hereinafter provided for.

Section 7. All persons who have complied with the provisions of sections 5 and 6 hereof, and who shall have a minimum of sixty hours of college credit from a college or university on the approved list of the North Central Association of Colleges and Secondary Schools, shall be eligible for examination before the Board of Professional Registration, and shall be required to take the same at the discretion of the board, which examination shall be held at such time and place as shall be determined by the board. Such examination shall embrace the subjects enumerated in section 6 hereof, and such other subjects as the board shall determine: Provided, That such examination shall include at least eighty per cent of the sixty semester hours college credits claimed by the examinee; and provided further, That an average of at least seventy-five per cent shall be required for the passage of any examination, and no person shall be allowed to pass who shall receive a grade of less than fifty per cent on any one subject.

The board shall make such rules and regulations governing the conduct of examinations as it shall deem expedient, and wilful violations thereof shall subject the applicant to the loss of the examination fee, and shall bar him from the privilege of further examination for the period of two years. Each person who passes said examination shall be entitled to receive the certificate provided for in subdivision (b) of section 4 hereof; Provided, That the board may, in its discretion, accept in lieu of such examination, a bachelor's degree

from any college or university on the approved list of the North Central Association of Colleges and Secondary Schools, or a college or university of equal rank therewith.

Section 8. Any person who shall unlawfully obtain either of the certificates specified in section 4 hereof, shall be guilty of a felony, and upon conviction thereof shall be punished by a fine of not less than three hundred nor more than one thousand dollars, or by imprisonment in the state prison for not less than one nor more than two years, or both such fine or imprisonment in the discretion of the court.

Section 9. All sums of money received by said board shall be paid to the state treasurer not later than thirty days after the receipt thereof, and shall be credited to the general fund.

Section 10. All acts and parts of acts inconsistent herewith are hereby repealed.

CLEAN SHIRTS

A modern hygienist has remarked that our conception of cleanliness has greatly changed with the advance in knowledge of the kinds of dirt, the degrees of dirtiness, and the nature of these dangers. We can no longer be satisfied, he adds, with physical or esthetic cleanliness, but must insist on biologic cleanliness. Invisible bacteria represent undesirable contamination quite as much as obvious matter out of place does. This indicates that in the ultimate analysis the services of a bacteriologist are required to make the distinctions between "clean dirt" and "dirty dirt." There is an implication, furthermore, that proper cleanliness affords protection against disease. Clean bodies require clean clothes. Heretofore the bacteriology of the latter has received comparatively little detailed consideration, but the improvements in the art of laundering are bringing the subject into somewhat greater prominence and may contribute something to the problem of the possible part played by clothing in the dissemination of micro-organisms. Thus, a recent study at the University of Nebraska in Lincoln indicates clearly the increment in bacteria that accumulate in undergarments as they are worn more frequently without washing. From an average count of about 400,000 per square inch after one use, the number increased to nearly 10,000,000 after a shirt was worn six times. The effect of laundering is represented by a reduced count of 1,000 or less. Washing alone is quite effective, but the drying process finishes the elimination satisfactorily. Sun drying is particularly potent. The organisms present on worn shirts were those common to air, soil and skin. *Micrococcus albus* (*Staphylococcus*) and *M. aureus* were most frequently found; streptococci also were often present. The large number of hemolytic types observed suggests that underclothing should be changed frequently and laundered by a process likely to check their development.—*Jour. A. M. A.*, June 2, 1928.

THE DOCTOR'S LIBRARY

Offering Suggestions and Recommendations

HA ROFEH HA IVRI THE HEBREW PHYSICIAN

VOL. 1 No. 1

Under the able editorial management of Dr. Moses Einhorn and Dr. Asher Goldenstein of New York, a new medical publication has made its initial appearance.

This is the only Hebrew Medical Journal published outside of Palestine. It contains articles on general medical topics and has a special section devoted to new Hebrew medical terminology and a medical bibliography dealing with contributions of distinct and particular ethnic interest to the Jewish race per se.

The medical Hebrew terminology deserves special consideration on account of its etymology or derivation. Three methods were adopted in order to bring it in accord with accepted usage and nomenclature or their proximal equivalents.

The first method pursued was perhaps the easiest and consists in the transliteration of Greek or Latin terms into Hebrew letters. The second method was to search for equivalents in the vast domain of Talmudic and Biblical literature, while the third method was to invent new terms, i. e. an artificial terminology or word coinage.

A glossary of new terms is appended to facilitate a better comprehension of the text for those who are not thoroughly familiar with the modern Hebrew nomenclature.

Two articles merit special attention, viz; one on Acute Haemorrhagic Pancreatitis ('Delek Tat kibith D'mamei harif) by Dr. A. Goldenstein, and the other on Pertussis (Kakath) by Dr. Paul Luttinger. In these two articles we may readily discern how terms were originated and adopted, how equivalents were formed and how therapeutic expressions were made to conform with accepted Latin and Greek sources.

This publication is a distinct and valuable departure in the field of experimental scientific terminology as well as a timely contribution to medical science.

One is eagerly awaiting subsequent issues, which according to the prospectus, will soon be out. It is hoped that such an undertaking will be crowned with the success it so richly deserves.

Dr. N. E. Arnstein.

RENE THEOPHILE HYACINTHE LAENNEC—A Memoir, Gerald B. Webb, M. D., President, Colorado School of Tuberculosis, Colorado Springs; U. S. Government Delegate to the Laennec Centenary, Paris, December, 1926; Thirteen full-page plates; Paul B. Hoeber, Inc., New York.

This little work of less than 150 pages is about as complete a biographical sketch of Laennec as we have seen in the English language. The author bases his work on the two volume biography of Laennec published by Alfred Rouxeau in 1912 and in 1920. The original work of course is in French. Dr. Webb's book deals in the usual way with birth and family, boyhood and school life,

the study of medicine with important chapters on the Stethoscope and on the "De L'Auscultation Mediate." The work is written in an entertaining readable style and is illustrated with engravings suitable to the volume. It is a fitting addition to the biographical studies which already bear the imprint of Paul B. Hoeber.

GRAVES' GYNECOLOGY—Octavo volume of 1016 pages, with 562 illustrations, 128 in colors. William P. Graves, M. D., Professor of Gynecology at Harvard Medical School. W. B. Saunders company, Philadelphia.

In reviewing the revised edition of Graves' Gynecology we unhesitatingly recommend it as one of the outstanding gynecologies of the day. Since its first appearance in 1916 three revisions have come from the press; the last has brought us about all of the recent progress in this specialty, particularly with reference to the physiology of menstruation and ovulation. The chapters on endocrinology and organotherapy are entirely re-written and are perhaps more clearly comprehensive than like chapters in any other treatise. Entire new chapters appear on questions of cancer and its treatment by radium. The section on sterility has been entirely re-written and is fascinating. The W. B. Saunders Company have apparently spared nothing in the publication of this volume to make it attractive—the 561 illustrations, 128 of which are in color, serve in a splendid way to elucidate the author's meaning. Both author and publisher are to be congratulated on the appearance and character of this edition.—H. Wellington Yates.

THE EVOLUTION OF PREVENTIVE MEDICINE—Sir Arthur Newsholme, K.C.B., M.D., F.R.C.P. Formerly Principal Medical Officer of the Local Government Board of England and Lecturer on Public Health Administration, School of Hygiene and Public Health, The Johns Hopkins University. The Williams and Wilkins company, Baltimore.

Since preventive medicine is coming more and more to the foreground, the story of its development is of increasing interest. The first half of the book is an interesting resume of medical history. The latter chapters deal with the development of our ideas of sanitation and definite prevention. The author's style is fascinating. Elsewhere in this number of the Journal appear sentences that illustrate the author's aphoristic style.

CALCIUM THERAPY—The fundamental principle underlying rational therapeutics. John Aulde, M.D.

The author deals in a very novel way with the treatment of disease by diet with special reference to calcium and calcium metabolism. He gives a brief survey of the literature and his experience with calcium medication with reference to the "laws of mass action," and its chemical interrelation with other body salts.

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In many cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

RESEARCH OF EPILEPSY URGED

A plea that each state provide research funds, so that the ancient, baffling disease of epilepsy may at last be effectively fought was made today by Dr. Robert L. Dixon, superintendent of the Michigan Farm Colony for Epileptics, before the American Psychiatric Association, meeting recently at Minneapolis.

There is no other disease with the prevalency of epilepsy about which doctors have so little positive knowledge, and about which they disagree so widely, Dr. Dixon declared. It is not even certain whether the conclusions are caused by a physical disorder or whether the malady has its origin in some psychic disturbance. The possibility that some infectious agent enters the body to cause the epileptic fits and personality traits has never been thoroughly investigated.

Research now conducted at the Michigan Farm Colony indicates that even before the convulsions set in, the first stages of the malady can be detected, and every attempt should be made, Dr. Dixon pointed out, to recognize and prevent epilepsy in this stage just as tuberculosis is now recognized and arrested.

Very large sums are spent by the states on epileptic patients, for little more than custodial care, Dr. Dixon pointed out. Institution staffs are so engaged with their regular work that they have little time for research, and the problem of epilepsy cannot be solved, he added, until research departments and laboratories are established at state institutions for epileptics, with separate workers who have the time and funds to conduct experiments and investigations.

No state has ever provided such a fund for a program of research in epilepsy. The Michigan legislature has been asked to establish such a research department, and Dr. Dixon expressed confidence that the next session of the Michigan legislature would provide adequately for epileptic research.—Science Service.

OLDEST MEDICAL BOOK TRANSLATED INTO ENGLISH

Skilled surgeons in the valley of the Nile knew more about human anatomy than their descendants of the middle ages, thousands of years later.

This is one of the surprising facts revealed by the translation of the Edwin Smith Papyrus, the oldest scientific book in the world, which has been completed by Prof. James Henry Breasted, well known Egyptologist of the University of Chicago. The manuscript is now being printed for the New York History Society, the owner of the document, by the Oxford University Press, which is the only place at the present time that has the facilities for setting up the ancient hieroglyphics in type.

The papyrus is regarded as the most important document in the history of all science that has come down to us from the time before the ancient Greeks. It is remarkable in that it shows an amazing approach to the attitude of the present day scientist, in striking contrast to the long lists of mingled charms and recipes that constitute a large share of the medical papyri of ancient Egypt.

Some of the diagnoses and treatments of injuries set down by the author-surgeon of 1700 B. C. in his orderly arrangement of cases are surprisingly modern. He made the first observation that has survived that the brain is the center

of nervous control; he felt that the heart and brain played an important role in our physical makeup; and he knew something of pulse or pulsation and of the circulatory system.

He divided his diagnoses into three groups, according to the seriousness of the injuries: One, "an ailment which I will treat"; two, "an ailment I will contend with"; three, "an ailment not to be treated", meaning probably those beyond the reach of his skill.

Among the mechanical appliances which appear for the first time in medical literature in this papyrus include a kind of vegetable lint used to absorb blood, linen bandages manufactured for surgical use, adhesive plaster of linen, and surgical stitching of wounds. The most remarkable observation in the ancient manuscript, which was probably intended as a text book, is in connection with a case of compound fracture of the skull with no visible external contusions. The old Egyptian surgeon noted that both the eye and gait of his patient were altered on the same side of the body as that on which the head injury had occurred, one of the earliest known observations that injury of the brain may result in disturbance of normal control of various parts of the body.

—Science Service.

FAD FOR LIVER MAY HARM WELL PERSONS

The fad of liver eating which has sent the price of this poor man's beefsteak up to eighty cents a pound may do harm to healthy individuals and deprive those pernicious anemia sufferers of this life-saving meat which they really need, the American Medical Association was warned in a program devoted to the latest reports upon the conquest of this hitherto hopeless disease. Dr. William S. Middleton, of Madison, Wis., reported that other types of anemia do not respond to the specific element in liver, although the Minot-Murphy diet, which includes liver, has been generally successful in treating secondary anemia.

Additional proof of the efficacy of liver in the treating of pernicious anemia was presented in a paper by Dr. James H. Means and Dr. Wyman Richardson, of Boston. In reviewing the treatment of this disease, Dr. Means made a suggestion as to its nature. It may be the result of a diet deficiency rather than a poison or infection. The fact that many people live on insufficient diets, and the discovery of a successful cure for pernicious anemia by means of predigested foods, indicate the primary cause may be a gastric defect.—Science Service.

It is marvellous that all the wisdom of the world is contained in a few aphorisms. Idleness is the parent of evil because it prevents the acquisition of skill which is the parent of creativeness. It is creation, not work, that makes life worth living. All children are destructive before they are curious. Later they destroy to satisfy their curiosity and not finding appeasement, they create. Then they get thrills and satisfactions they have never before experienced. By developing constructiveness they learn how to think, by enhancing it we teach them. Information promotes knowledge through observation and construction; knowledge itself is of no use to anyone, save the possessor, until it is transmuted into wisdom and then shared with others. The transmutation is accomplished by taking thought.

—From "The Doctor Looks at Love and Life." By Joseph Collins.

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THE CONTRIBUTION OF MEDICINE TO MODERN CIVILIZATION*

H. E. RANDALL, M. D., F. A. C. S.

FLINT, MICHIGAN

Three hundred years ago William Harvey announced his discovery of the circulation of the blood. Harvey hesitated fifteen years before he published his book of seventy-two pages. In chapter eight he says that he "fears not only injury to myself from the anger of a few, but I tremble lest I should have mankind at large for my enemy." At least twenty anatomists wrote against Harvey's discovery. Harvey also wrote, "the authority of Galen is of such weight with all, that I have seen several hesitate greatly with the experiments before them." It will be recalled that the books that have profoundly affected human thought have not been rushed to print. Francis Bacon waited twelve years, and Copernicus thirteen years. Both Newton and Darwin waited twenty years before publishing their works.

HARVEY'S GREAT CONTRIBUTION

Galen was the authority in medicine for over fourteen centuries, and of the twenty-two volumes that he wrote, sixteen volumes were on the pulse. Galen had said the blood ebbed and flowed like the tide. Disease, according to Galen, resulted from excess or deficiency of the humors. There were four humors: lymph, blood, yellow and black bile. There were three spirits: natural, vital and animal. The natural spirit rose from the blood which was formed in the liver. The blood at heart combined with the vital spirits which arose in the brain and was there transposed to animal spirits. Yet Galen came very near to discovering the circulation of the blood, as Harvey frequently calls attention to Galen's experiment of opening an artery between two ligatures and finding blood instead of air. We still carry in our words the old humoral theory in our

* Presidents annual address, Michigan State Medical Society, September 26th, 1928.

expression of temperaments as the sanguine or the joyous, the sad or melancholic, the excitable are choleraic and the slow are phlegmatic. Harvey, in his fear of personal injury to himself, could point to the treatment of Servetus by Calvin for his discovery of the lesser circulation of the blood.

William Harvey's discovery of the circulation of the blood was based on animal observations and experiments. In the background of this first medical scientific research was the influence of the anatomist, Vesalius, who discovered several mistakes of Galen, one of which was the hypothetic pores between the ventricles of the heart. Vesalius in sarcasm said, "we are driven to wonder at the handiwork of the Almighty by which the blood sweats from the right into the left ventricle through passages which escape the human vision." In the background of Harvey's discovery also were the innovations of Ambroise Pare in surgery, and Paracelsus in chemistry in attacking Galen's humoral theory of disease. Paracelsus' chief contribution was to employ chemicals as drugs, and who insisted that the aim of alchemy should be to cure the sick.

THE HUMORAL A MEDIEVAL THEORY

The humoral theory of disease explains the treatment during the middle ages and even up to fifty years ago by purging, by sweating, emesis, blood letting, blistering and elimination to rid a patient of disease.

Not only medicine, but various other sciences were dominated by authority. Pliny was still the authority in botany and Aristotle, the infallible court in philosophy and natural sciences. But Harvey, Galileo and Shakespeare were born almost the same year. Bacon, Shakespeare, Columbus and Copernicus were contemporaries. These men were to open up to mankind not only a new world, but an infinite universe. This is the beginning of a new age for man which we call modern civilization, made possible by modern science. As the Magna Charta is to liberty, so Harvey and his work is to modern medicine.

THE WORK OF SYDENHAM

No account of modern medicine is complete without a mention of Sydenham, the English Hippocrates. Sydenham re-introduced the Hippocratic method of bedside observation and dared to believe it possible to draw a complete picture or description of a disease which carries with it the possibility of a specific remedy. He said

he knew of but one specific remedy for a disease and that was Jesuit's bark, which was then worth its weight in gold. He distinguished scarlet fever from measles, wrote clear, plain descriptions of hysteria, chorea and gout. He was, however, still suffering from the old tradition when he said that small-pox was not a disease, but a condition which it was necessary to undergo in order to renovate the blood.

Medicine has not learned much from empiricism. Mercury for syphilis; cod-liver oil for rickets; ipecac for dysentery; digitalis for the heart, and quinine for malaria, being about the only contributions. Patients that were not treated by elimination were treated by the doctrine of signatures. According to this peculiar doctrine the Creator had placed signs on plants to indicate their uses. Yellow flowers, dandelion and saffron, were for jaundice, Adder's tongue for snake bite; walnuts being perfect signature of the head, were for wounds of the head; liver wort, because it resembled liver tissue, was designed for liver complaints; peonies for anemia, and the dull red buds of fig wort resembling scrofulous pimples, were naturally selected for scrofula if one could not get the king's touch. How much different the magic touch of the sun's rays to the king's touch for scrofula and rickets.

The shotgun prescription of the past has been succeeded by the rifle of the active principle of a drug. The Polypharmacy of the Egyptian and Arabian, consisting of from twenty to one hundred ingredients and the pseudo-religious medical and pharmaceutical hocus-pocus of the middle ages had been thrown into the discard. But it was not until the late fifties of the nineteenth century that the exact study of the action of drugs was attempted. Little wonder that Francis Bacon could say truly "that medicine of his time was a science which has been more professed than labored and yet more labored than advanced, the labor having in my judgment been rather in circles than in progression. For I find much iteration but small addition."

SO-CALLED SUPERNATURAL CAUSE

Disease to the savage is due to supernatural forces, a visitation or a punishment of the Gods, and relief is to be sought by prayers and supplications. And to the superstitious, disease is believed to be due to the work of the Devil. Even Martin Luther said, "Pestilence, fever, and other

severe diseases are none else than the works of the Devil."

Today medical science can assure the world that never again will it be visited by the great epidemics or pandemics like black plague which in the fourteenth century took a death toll in Europe of twenty-five millions, or of small-pox, which was responsible for the death of sixty millions in Europe in a century, when every tenth patient died and one fourth either died or were disfigured for life. Thomas MacCauley called small-pox the most terrible of the ministers of death. How true have come the words of Thomas Jefferson in a letter to Jenner: "Future nations will know by history only that the loathesome small-pox has existed and has been by you extirpated." Unfortunately, there is in the United States a spread of anti-vaccination propaganda in which are made the most absurd fabrications and misstatements. The evidence is overwhelming that Jenner's vaccination is effective and that immunity can now be safely conferred. There have been ten and one-half million vaccinations given by the army, navy, and public health officers without a single case of syphilis. This should be a complete final refutation of the alleged dangers of vaccination. The state of Pennsylvania has made vaccination compulsory and not a case of small-pox in a native has occurred in fourteen years. Fourteen large American cities reported last year 6,387 cases of smallpox with 1,298 deaths, which teaches us that no one can predict when a severe form of small-pox may replace the mild form.

THE UNSANITARY FACTOR

The water borne diseases: cholera, typhoid and dysentery, are now preventable diseases. Yet only fifteen years ago there were twenty-five thousand deaths and two hundred and fifty thousand cases of typhoid fever in the United States. During the Spanish-American war there were 107,973 enlisted men. One in every five contracted typhoid. In all there were over twenty thousand cases and 1,580 died. Contrast this with 4,000,000 enlisted in the Great War with 1,056 cases of typhoid fever and 156 deaths. This result may be credited to improved sanitation, but was largely due to Wright's bacterin (anti-typhoid) injections. By contrast, in the French army there were 125,000 cases of typhoid fever; in the German army 112,000; and in the Austrian army, 171,000 cases. Had typhoid fever not been preventable during the World War and the

ratio of the Civil War had prevailed, there would have been in the American army 226,000 cases with 62,694 deaths. Typhoid fever did occur in sections of France where our troops operated. The American death rate was the lowest because our army had time to carry out thorough vaccination. The death rate of typhoid fever, a disease spread by contaminated water, milk and food, by flies and human caries, is altogether too high in the United States, contributed largely by some of our southern states. We note with pride that our own Victor Vaughan was the discoverer of the part played by the fly in carrying typhoid fever. The death rate is still eight times as high as in England and Wales. The Montreal epidemic of last year shows the dangers of a human carrier. This epidemic was traced to a foreman in a pasteurizing plant. In March and April (1927) 2,603 cases, with 233 deaths, were reported. No comment is necessary of the necessity of a bacteriological examination of those who handle human food if the public be not immunized against typhoid.

The mortality of diphtheria is absolutely dependent on the length of time that has elapsed before anti-toxin is administered. When anti-toxin is given within the first day, only 1 per cent die, while the mortality is 5 per cent if given the second day—7 per cent for the third and 8 per cent and up on the fourth day. The tremendous reduction of mortality from pre-anti-toxin days of over 30 per cent, to 1 per cent if given early, is one of the marvels of modern times. The city of Auburn has shown what can be accomplished by an intensive campaign. The city of Auburn has had just two deaths from diphtheria in nearly four years. In neither case had the patient been immunized. The Shick test has been found to be a reliable guide to those who are susceptible to this infection and through immunization, by toxin and anti-toxin it is not unreasonable to predict that diphtheria can be entirely eliminated, as several cities have demonstrated.

The same success has been attained in scarlet fever. Doctors Dick and Dick took personal charge of the immunization of patients at the Michigan Home and Training School at Lapeer, Michigan, and there have been no cases except in those who are newly arrived and in cases of attendants who have not been immunized. The significance of this work is realized when we recall that scarlet fever ranks fourth in mortality from infectious diseases.

HEALTH AND PROGRESS

That medical progress has a bearing on civilization we may note that the control of hookworm and pellagra is making a new south which failed to come back after the Civil War. Good health is as necessary for a nation as for an individual, if they are to progress and make a strong, happy people.

It is said that yellow fever is the first disease to be completely eradicated by scientific methods. Of this we are proud because its elimination was an American contribution and the Rockefeller Foundation has dedicated itself to the task of eliminating yellow fever from the whole world. There have been no deaths in the United States for several years, whereas it formerly was the cause of the death of thousands. The role of the mosquitoes in yellow fever and malaria is established. There are 800 different mosquitoes, but the stegomyia and the anopholes have been condemned as the arch criminals and the male sex can get what satisfaction they may out of the fact that it is only the female mosquitoes that are the culprits, the male being a vegetarian. Finlay was correct in his reasoning that where there is yellow fever, there you can find stegomyia. Where there are no stegomyia, there is no yellow fever. That malaria is disappearing is true and the problem is merely one of destroying the mosquitoes, as has been demonstrated by Gorgas in the building of the Panama Canal and cleaning up of Havana. Five millions of cases were reported in Russia in 1923. Perhaps in time it may be necessary to ship in mosquitoes infected with malaria into the United States to supply the treatment of paretic dementia for pareses has been arrested by infection with malaria and then eliminating the malaria by intensive treatment.

THE FIGHT AGAINST TUBERCULOSIS

Deaths from tuberculosis have been reduced 50 per cent since 1907. Nine millions are doomed in the United States to die of tuberculosis unless the disease is checked. Tuberculosis has already become a class disease. It is largely a disease of the poor and is an economic or sociologic problem. Over 1,000,000 cattle have been slaughtered to prevent bovine tuberculosis in children. Gland tuberculosis is not so frequent as formerly and its treatment is no longer surgical. Pasteurization of milk and a clean milk supply has been urged and the fight has been carried on by the medical profession. There is hope that the

recent experiences with the Calmette anti-tuberculosis vaccine in Paris and the provinces may prove to be the solution of the prevention of tuberculosis. The figures are encouraging. Nearly 4,000 infants born of tuberculous mothers or in homes with one or more cases of tuberculosis, the mortality was less than 1 per cent—while those similarly exposed but not vaccinated, the mortality ranged 25 to 80 per cent. For comparison, Denmark had the lowest mortality of children under 1 year of life and their mortality was 7.7 per cent. The children in Paris itself who have been vaccinated and who have now reached ages from 2 to 3½ years, the mortality has been nil. These results are most encouraging.

The ravages of syphilis are little suspected by the public. Syphilis affects at least 5 per cent of our total population. There are 300,000 insane in our asylums and one-eighth of these, or about 37,000, are cases of general paresis. It may be noted in passing that syphilis is now more prevalent among uncivilized than civilized nations. Paul Ehlich and his staff brought forth a specific remedy for syphilis. This work is said to have cost ten millions of dollars, a small amount to pay for a specific remedy for a disease.

The number of drugs for a disease is in direct proportion to our ignorance as is evidenced in the fact that there are 50,000 drug items listed that are supposed to be a weapon against the common cold. The unconquered scourges of the human race are influenza, which caused ten millions of deaths in the last epidemic. Pneumonia, which causes 10 per cent of all deaths in the United States. Late cancer and rheumatism should be added to this list. Just think what could be done if there were a specific remedy for acute rheumatic fever and for septicaemia. Think of the diseases of the heart that could be prevented which is now the leading cause of deaths in this country, causing 14 per cent of deaths at all ages and 23 per cent at the age of 40 or over. Here are fields of research that are the most inviting and urgent in the field of medicine.

AID OF COLLATERAL SCIENCES

Medicine could not have made such progress had it not been for the valuable discoveries and researches of the chemists and the pharmacologists. The chemist took, for instance, cocaine consisting of 43 atoms and after determining which group of atoms produced local anaesthesia, he proceeded to build up new compounds hav-

ing greater pain-destroying qualities and eliminating from the group those having toxic effects. The works of Abel and of John Hopkins in producing adrenalin synthetically is another of the marvelous achievements. Kendall, of the Mayo clinic, did the same with thyro-toxin. Here are examples of the production of the active principles of the internal secretions. The accomplishments of Banting and MacCleod with insulin in diabetes, and of Minot and Murphy with liver in pernicious anemia, illustrate the necessity of the safeguarding of our research workers and animal experiments. Medical research workers are slowly but surely solving medical problems that will relieve humanity of pain and disease. The refinement in the production of Chalmargroo oil has resulted in the cure of leprosy and is the answer to the century-old cry, "thou can't make us clean." The research worker and the chemist will in time learn to make artificially the pure principles of the anti-toxins, thus eliminating serum sickness. Animal experimentation is the keystone of medical progress and without new knowledge acquired in the laboratory, medical progress is absolutely blocked.

We are the heirs of the knowledge gathered by painstaking investigators who have not received the applause of the world or the rewards of the warrior, but whose gifts to mankind have resulted in the saving of lives, restoring the lost, rehabilitating the soldier and the crippled child and making the world a happier and safer world in which to live.

When the corn borer threatened to destroy a great staple crop, Congress lost no time in appropriating \$10,000,000 to stop the devastation. Hogs and cows have received consideration from the national treasury, but \$40,000 was considered sufficient for chemical research that might benefit humanity. Man, it seems, was expected to shift for himself.

By medical knowledge it has been possible to clear up the tropics, "the white man's grave," to prevent the spread of the great epidemics, medical men have fought the battles for pure food laws, taught the value of sunlight and fresh air, and of sanitary water supplies, has taught the dangers of the flies, the louse, and the rats, has changed the thought of the world that the end of life was not to mortify the flesh but rather to recognize the human body as God's temple.

PROGRESS IN DIAGNOSTIC METHODS

The study of the human body—the comparison of symptoms with the findings on the post-mortem table, beginning with Morgagni and added to by Laernec and by thousands of records, has resulted in an exactitude of diagnosis. The X-ray, the stethoscope, the electric cardiograph, the microscopic study of tissues, chemicals and bacteriologic test in the laboratory, the ophthalmoscope, cystoscope and the study of functions of the various organs of the body, has enlarged the faculties of the modern doctor. Not so many years ago he could tell nothing about a patient except what he saw or felt with his unaided five senses. Diagnosis and treatment are no longer guesswork.

The American people believe in the modern hospital. Since 1923 five billion dollars have been invested which requires daily an expenditure of three millions of dollars. One million of men and women are engaged in caring for the sick and in promoting health and the prevention of disease under the guidance of approximately 150,000 physicians and surgeons. The modern hospital represents the acme of conveniences for the study of patients and for the complete examination and for the application of proper remedies, as the result of the various studies and examinations.

MEASURED IN HAPPINESS

The achievement of medicine and its contributions to modern civilization suffers not in comparison with other professions or with those of the various sciences in adding to human life in its service to humanity. The medical profession believes that life is worth living, and that without health and strength and happiness, life is only a thrice told tale. Osler says, "To those of the medical profession who measure progress by the law of greatest happiness to the greatest number—the leaves of the tree of science have been for the healing of the nations. Measure as we may, the progress of the world. Materially in the advantages of steam, electricity and other mechanical appliances, sociologically in the great improvement in the conditions of life; intellectually in the diffusion of education; morally in the possibly higher standard of ethics—there is no one measure which can compare with the decrease of physical suffering in man, woman and child when stricken by disease or accident. This is the one fact of supreme personal import to every one of us. This is the Promethean gift to man."

The miracles of the Bible times are the commonplace facts of today. "The eyes of the blind are opened"—"The halt and the lame walk"—"The withered hand is healed"—"The palsied take up their bed and walk," and modern civilization would be impossible without the aid of modern medicine. Modern rapid transportation would in a few days spread the great epidemics from one end of the world to the other. In fact, civilization can be measured by the statistics of public health and the vitality of its people. Millions of children annually are saved from death. The crippled and handicapped boy and girl is relieved of deformities to make them self-sustaining and self-respecting. The surgeon annually saves thousands of fathers and mothers and the family ties remain unbroken. Thousands of mothers are saved as they go through the valley to perpetuate the race. Puerperal sepsis is now practically unknown, whereas hospitals formerly had to close when the maternal death rate mounted beyond 50 per cent. Asepsis and anti-sepsis surgery save annually more lives than were lost in the Great War. We no longer hear the expression, "a bold surgeon," because all over the world surgeons are operating not only on the extremities, but in the abdomen, chest, brain, and spinal cords. Pasteur and Lister were the greatest benefactors of the human race that ever lived, and made possible the relief of suffering and the prolonging of the human life. "Health, public health, individual health and satisfaction are the cornerstones of a successful and fortunate civilization," says Nicholas Murray Butler. "Without these everything is imperfect or impossible. With them everything is possible. The family is more thoroughly protected today from physical ills than ever before. The span of human life has been increased about six years in the past fifteen years. The medical profession says it is not enough that such be treated skillfully, the well must be urged to preserve their own health."

HEALTH AN ECONOMIC ASSET

In war the state is vitally interested in the health of its army of defenders. So in peace the state is also vitally interested in the health of its people. The welfare of society is hindered by ill health, by physical defects and deformities and lack of efficiency, whether physical or mental, of its members. The members of society who consume more than they produce and who

take out of society more than they put in, are a drag upon public welfare. The dependents of society, the wards of state institutions, while alive, should be humanely treated, but society requires that they produce no more of their kind for future generations to support. So the state is vitally interested in medical progress to prevent illness, to correct handicaps when present, and to make each of its members as near self-supporting as possible.

Modern civilization has lessened the burdens of toil by labor saving and time saving machinery and knowledge is more rapidly transmitted. The toiler of today has conveniences and comforts unknown and undreamed by princes and through medical science by sanitation, hygiene, specific cures, modern aseptic surgery and increasing knowledge of the human body in health and disease, has made for the present generation the beginning of the millenium on earth. The goal and ideal of all medicine is the time when all diseases that afflict mankind may be prevented and then earth will be Heaven.

It was Cicero who said long ago "that man comes nearer to the Divine when he brings back health to the suffering than at any time or in any way."

The medical profession is proud of its achievements. Modern medicine has received its contribution from citizens of all nations. For England gave us John Hunter, Addison, Bright and Lord Lister; Germany gave us Virchow, Koch and Ehrlich; France gave us Laennec, Louis, Bretonneau, Laveran and Pasteur; Poland gave us Madame Curie; Russia gave us Pavlow; Japan gave us Noguchi, Yersin and Shiga; Switzerland gave us Kocker; Ireland gave us Corrigan, Stokes and Graves; Spain gave us Cajal; Canada gave us Osler, Banting and McLeod; and America gave us Long and Morton, Ephriam McDowell, Carrol, Lazear, Holmes, Crile and the Mayos and Beaumont.

We glory in the service that medicine has been to humanity, and we pay our humble tribute to those great medical heroes who in pursuit of knowledge have laid their all on the altar that suffering and pain might be abolished.

We predict that the coming years will slowly but surely add to the forces in the prevention and conquest of disease for even "greater than the greatest discovery is to keep the way open for future discoveries."

MALIGNANT DISEASE—A SURVEY*

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Two investigations of cancer mortality in the United States (one by the Metropolitan Life Insurance Company, and the other by the United States Public Health Service, for the general population of the registration areas of the United States) would seem to indicate that cancer as a cause of death is increasing. The evidence of these two reports is counterbalanced by the fact that—as H. Gideon Wells of the University of Chicago, states—"the increase in the cancer rate is just about the same as the increase in the other three common causes of death in those who have passed the prime of life—cerebral hemorrhage, nephritis and heart disease." While there are a number of factors responsible for the apparent increase in cancer mortality—more autopsies, better methods of diagnosis, more accurate certification of causes of death, etc.—the increased duration of life probably is by far the most important factor in the equation. In the 120 years from 1800 to 1920 there has been in the United States a gain of 25 years in the expectation of life. It is also true that in the last two decades, from 1900 to 1920, there is shown a relatively greater gain than for the earlier periods. Therefore, in summing up the evidence, pro and con, as to the increase in cancer mortality, one may draw the conclusion that while there is an apparent increase, the real increase, if present at all, is exceedingly small.

ETIOLOGY

Conjectures there are in plenty to account for cancer causation. Dr. Peyton Rous, some fourteen years ago, demonstrated that chicken sarcoma could be crushed and filtered through a tube and yet the filtrate was capable of exciting a new growth of the same type as the original when inoculated into another fowl. No causative agent in this phenomenon was ever found.

Dr. W. A. Gye and Mr. J. C. Barnard began about four years ago to carry on the investigations into chicken sarcoma at the point where Rous left off. The results of their work was published in the *Lancet*, July 18, 1925. Gye claims to have been able to isolate the organism from chicken

sarcoma with the invaluable aid of the microscope designed by Barnard. The active agent, or virus, by itself, cannot bring about malignant growth. For this purpose a specific substance injected alone has not produced the tumor, but the combination of the virus and the specific subject did produce cancer. The specific substance is believed by Gye to be of chemical origin, tar, soot, paraffin oil and irritants of a like nature. It is suggested that the "virus" is ubiquitous and ready to invade when suitable conditions present themselves. It has also been stated that Dr. Gye has discovered a means of successful immunization against cancer.

There are several points in the parasitic theory of cancer as set forth by Dr. Gye which are obscure. Is the so-called "virus" really an organism? It is necessary also to demonstrate that when the specific substance is separated and treated with chloroform it is absolutely free from cancer cells. Most important of all, it is yet to be demonstrated that what has been done with chicken sarcoma can also be accomplished with mammalian carcinoma. The chemical nature of the specific substance must be sought. Dr. A. J. A. Carrel of the Rockefeller Institute (N. Y. City) has concluded as a result of his investigations into the Rous chicken sarcoma that two factors are necessary for the production of malignant disease; (1) a focus of active cell multiplication. (2) a non-specific chemical substance, such as tar, arsenic, certain substances produced by bacteria, or tissues injured by X-ray, etc. When one of the latter, or a substitute, resulting from its action on the tissues, finds itself in contact with body cells in the process of active proliferation the cells become sick and manufacture a substance similar to the filterable agent of the Rous chicken sarcoma. Carrel believes it possible that toxic substances in normal serum may act on the cells of an area of chronic inflammation in the same way that tar injected into the blood stream may act on a benign chicken teratoma. Carrel's hypothesis is that of a tumor arising from the action of a non-specific chemical substance on an area of active cell proliferation.

Dr. John Nuzum of Chicago, a few years ago, announced the discovery of a micrococcus which he suggested was the cause of cancer. Recently, he has published a description of his investigations. He isolated the micrococcus from human breast cancer and by injecting the organ-

* Read before the Wayne County Medical Society and the Alumni Association of the Detroit College of Medicine and Surgery—a part of the Post-Graduate Educational Program of the Michigan State Medical Society and the Department of Post-Graduate Medicine, University of Michigan, May 14-17, 1928.

ism into mice, claims to have produced typical carcinoma. The same results were obtained by Dr. Nuzum from a like inoculation into a human being. He concludes that the micro-organism is regularly present in human breast cancer and is transplantable in the mouse.

Dr. Glover of New York, formerly of Toronto, Canada, a few years ago, declared that he had isolated an organism which fulfilled all the requirements of the Koch postulates and that its inoculation would reproduce cancer at will. This claim was not accepted by the profession at large, but the research was continued by Glover and other investigators and according to these, the micro-organism isolated is polymorphic, appearing as bacillus, micrococcus or spore sac. They state that they have found this parasite in every carcinoma examined and can reproduce the growth in all animals in which it is inoculated; recover the organism from this growth, and complete the cycle indefinitely.

Dr. James Young of Edinburgh asserts that in his opinion there are two factors which change a normal cell into a cancer cell: An antecedent cell susceptibility and an immediate cancerogenic factor, and that he almost constantly obtains from cancer an organism with a complete life history. It possesses amorphous and polymorphous phases, each of which grows true to type and lives a wholly independent life. He believes that the parasite belongs to familiar bacteria, widespread in nature, and the ease with which cancer can be produced in animals by irritation implies immediate risk of infection by ubiquitous organism. Young holds that, from a description of Glover's organism, it is identical with the one he has isolated in its essential features. His theory, which is antagonistic to traditional views, he explains by attributing to bacteria the faculty of variation. Young thinks that the investigations of Lohnis of the Bureau of Plant Industry (Washington, D. C.), makes it reasonable to presume that all bacteria have a filterable form of life and that this may even be the essential parasitic form of all bacteria. He believes that the filterable forms said to have been discovered by Nuzum and Gye will probably prove to be fragments of a complex organism, as are also the bacilli of Ford-Robertson and Blumenthal.

Professor Blumenthal, of the Berlin Institute of Cancer Research, claims to have succeeded in producing cancer-like tumors in rats and mice by means of bacilli ob-

tained from fragments of human cancer after liquefaction by the agency of burning glass. He suggests that these bacilli—which appeared as droplets after liquefaction—carry a "virus", and it is the "virus" and not the bacilli which causes cancer. Blumenthal also states that he has stimulated a growth of rat cancer by lymph taken from human cancer, so that he, apparently, does not agree with Gye that specific substances are necessary for the production of cancer.

Bilroth claims that without previous chronic irritation cancer does not exist, and among research workers there is practically universal agreement that localized chronic irritation is mainly responsible for the production of the precancerous cell. Of late years, it seems to be pretty generally accepted that the cell change is not dependent upon the class of irritation. Practically any type may excite malignancy, if long continued.

In discussing the etiology of cancer and the various theories to account for it, it is necessary to include the research which has been done to discover precancerous conditions. In King's College laboratory, London, Dr. Shaw Mackenzie has been experimenting for many months to ascertain whether there is any distinct difference between the blood of cancerous and non-cancerous subjects, and whether the blood of cancerous patients can be so modified as to increase their resistance to disease. Shaw Mackenzie has made use of the lipolytic action of the blood as a means of diagnosing the presence of cancer, a normal reaction strongly suggesting its absence. He claims to have had success along these lines. The Westminster Hospital Research committee, England, has made a careful study of this method for the predetermination of cancer and reports that "a positive result is absolutely valueless, for it is given by a certain percentage of normal, healthy individuals, and by various other conditions than cancer, some of them prone to manifest themselves at the 'cancer age'—such as nephritis and late syphilis. A negative reaction is, possibly, in a fairly large percentage of cases, evidence against cancer."

The investigations of Doctors Loeb, Maude Slye at Chicago, and Lynch at the Rockefeller Institute, and other workers in various laboratories, have amply demonstrated that animals can be bred with a very high or a very low incidence of cancer, but that the inheritance is on Mendelian lines, as Dr. Slye claims, is not gener-

ally admitted. Thus, to date, all of the theories advanced to account for cancer—constitutional, parasitic, or strictly cellular—are entirely inadequate. That cancer is a process of malignant cell proliferation is evident, but what causes this proliferation—the basic etiology of cancer—is absolutely unknown.

Some years ago, the present writer called attention to the fact that cancer may be of far more multiplex pathology (of more strictly defined variations) than our present classical pathological differentiations would seem to indicate, but whether the complex variations exhibited by tumors of the so-called same pathology are centered in the neoplasm itself, or in a chemical or other reaction in the host, is a matter of mere surmise. As medical science advances, it may be possible to demonstrate why neoplasms of the same pathological structure—the same cellular formation under the microscope—show such clinical variations; such degrees of virulence in different individuals. If all the types of cancer which we are able to classify are parts of the same disease, may there not be other potent factors, unknown to science, underlying the malignant process within the host? In summing up the evidence relative to the various factors held responsible for cancer causation, there can be but one conclusion—there is no convincing proof that the etiology has been solved.

While England and Germany are interested in cancer from the pure research point of view and France is concentrating upon radiation and other methods of treatment, America is emphasizing the education of the laity as one of the first principles of prevention. There must always be the two extreme viewpoints in regard to educational campaigns for the general public. Campaigns which stir fear and emotional distress are to be discouraged. There can be a well balanced middle ground. The public, for example, may be taught that prolonged irritation at any site of the body is conducive to malignancy; that any abnormal symptom requires the immediate attention of a physician, and that periodic health examinations are the most certain means of ascertaining any deviation from the normal in the individual. Descriptions of possible precancerous conditions, and definite information concerning the success which, practically, always attends the adequate removal of early carcinoma are types of legitimate

propaganda which may be circulated freely among the laity.

The present status of biotherapy, as applied to cancer, is difficult to define. The results secured from the employment of bacteria, micro-organisms, in general, or the use of sera, are contradictory in the extreme. Many cures from various sera have been reported, but these are counterbalanced by the great number of negative returns. The Immunity Process, as demonstrated by the Middlesex Hospital, London, is one of the most interesting, but it is still in the experimental stage. Briefly, the experiments have been undertaken to prove that if growing tumor cells are given a lethal dose of X-rays, they do not grow when inoculated into normally susceptible animals, or that recurrence in such animals is arrested following removal of the primary growth, a lethal dosage of X-rays applied to the growth removed and the re-implantation in the original host. The cumulative data regarding these experiments is interesting, but conclusive evidence that the treatment will produce cancer immunity is still lacking.

Injections of colloidal metals—lead, copper, gold, etc.—have come to the fore recently in the treatment of malignant disease. The most impressive of these experiments are being carried on by Dr. Blair Bell of Liverpool, England, who does not believe in one specific cause of cancer, but holds that the disease has a multitude of causes, associated with one common factor. He regards malignant neoplasia as biological atavism, and in his opinion whatever factor, whether metabolic or extrinsic, can permanently injure the cell, without killing it, may be looked upon as a predisposing cause or exciting factor of malignant development. The lead treatment is in accordance with this view and is based on the fact that this metal has a special lethal action upon cells of cancerous growth, as of chorionic epithelium, or normal embryonic growth and mature cells rich in phosphatides. Professor Bell claims to have had considerable success in advanced cases of cancer, with this mode of treatment. In commenting on the lead treatment for malignancy, the British Empire Cancer Campaign Committee (Annual Report, 1927) says: "In post-mortem examinations of eight cases of cancer which died during treatment by colloidal lead preparations, no evidence was found suggesting any destructive change in the cancerous tissue or any arrest of the process, but some vital organs had suffered damage. In all cases the kidneys showed extensive

tubular degeneration. Focal necrosis of the liver with advanced fatty changes was a common finding." The report adds: "The treatment of cancer by means of colloidal lead according to the method of Professor Bell is being investigated whenever suitable cases are admitted to the hospital. (Christie Hospital, Manchester, England). The number of cases treated so far is not sufficient to show any definite results, but the investigation is being continued."

In analyzing the results of radium and X-ray in the treatment of malignancy, even after the many years these methods have been in use, it is not easy to make definite statements. Opinions on the subject vary widely among the profession. It is, perhaps, safest to say that the value of X-ray or radium treatment is limited and that the best results are obtained in conjunction with surgery in suitable cases, or as post-operative treatment in cases which appear to lend themselves to radiation. Diathermy—or, as it is now termed, electro-coagulation, seems to give some measure of success in certain types of cases. Dr. Howard Kelly uses the Clarke method of electric coagulation combined with the cutting needle of Dr. Wyeth in the treatment of superficial malignant growths and claims that the method is satisfactory. Dr. W. D. McFee uses electro-coagulation in the treatment of external or accessible cancer and also in treating deep-seated growths after they have been exposed by ordinary surgical procedure. Others have reported successes with other types of electrical treatments. The Percy Cautery is a development of electric therapeutics of which earlier forms were the cauterization of Byrne and the electro-coagulation of Doyen.

The De Keating Hart Method, which essentially, was first described by Riviere of Paris, was tested by the present writer on 235 cases from 1911 to 1917. After the World War, those cases which could be traced were analyzed and the summary indicated that:

1. In small superficial growths there was improvement—fully as good results as were obtained from radium or X-ray.

2. When the Dr. Keating Hart Method was employed following surgical removal of the gross lesion, the results were, in many cases, remarkable. Whether the radical surgery, an essential part of the method, was responsible for the result, or whether the fulgurating spark was the accountable agent, is still a debatable matter. The evidence would tend to prove,

however, that surgery was the significant factor.

3. Following fulguration, the profuse, serous discharge from the fulgurated surface may prove an added element of aid to rid the host of all the diseased surface-cells.

4. Destructive fulguration—pseudo fulguration—is electro coagulation from an ordinary high frequency spark. This burns down the growth, but distant malignant cells, not destroyed by the heat, may be stimulated by it and thus local benefit, due to the destruction, may be counter-balanced by the stimulation.

Radiation, or surgery, as applied to malignancy of the breast and of the uterus, has called forth a great deal of controversial opinion in the professional world. The British Ministry of Health, 1927, made an extensive report on the results of treatments—radiation and surgery—in malignancy of the breast. The report covered a very great number of cases which were collected from many hospitals in England. Statistics quoted from this report show that in breast malignancy, following the modern complete operation, 52 per cent of cases are alive and well after a three-year period; 39 after five years, and 30 per cent after ten years. These statistics relate to patients who were in various stages of the disease. When results were tabulated according to the stage of the disease—before the disease had extended beyond the breast itself—91 per cent were well at the end of five years and 87 per cent at the end of ten years.

In cancer of the uterus, the radiologists claim that the mortality is very high following surgical procedure. The surgeons are equally emphatic in pointing out the poor results obtained by radiation in uterine malignancy. For example, Reguad, Beuthrer and Horsdike state that radium treatment effects a cure in from 15 to 20 per cent of cancer of the cervix. Faure, of Paris, with thirty years of most successful gynecologic practice behind him, states that he has had but one case of definite recovery (in uterine cancer) with radium. In regard to surgery, Faure feels that the cures of uterine cancer may reach as high as 80 or 90 per cent, if operation is performed while the uterus is still mobile.

In a collective review of gynecologic literature of 1926, the editors of the American Journal of Obstetrics and Gynecology, September, 1927, state their reactions to the statistical evidence offered, pro and

con, concerning surgical or radiation treatment in malignancy of the uterus, thus: "We are of the opinion that operation is more sound and is the method of choice to be employed in properly selected cases. In spite of the inspired statistics of radium therapy and the ambitions of the roentgenologists, the death rate remains without appreciable change." Early diagnosis, technical facility in thoroughly excising the growth and probable channels of future recurrence and, in some cases, post-operative radiation are, at present, the most practical methods applicable to uterine carcinoma.

In summing up the present status of the cancer situation as it appears in January, 1928, briefly, there is little which is new and at the same time of real importance in the field of malignancy. The recent conference on cancer, held in America, and known as the Mohonk Conference, brought to light nothing new regarding cancer, although some interesting papers were presented and much data accumulated.

In 1915, the present writer published a summary of facts regarding cancer. Today, after but slight revision, these are as basically true as when first printed. Thus, it is apparent—

That, while there is some evidence which suggests that heredity may be one of the remote factors determining the susceptibility, or resistance to cancer, the congenital acquirement of cancer remains unproved. Recent research which claims that predisposition or resistance to malignancy is based largely on the blood group to which the individual belongs, is a fertile but an unworked field of investigation.

That the contagiousness or infectiveness of cancer is highly improbable, and in the case of cancer patients with external manifestations—ulceration or discharge—one needs to take only the same precautionary measures as would be adopted in the care of any open septic wound.

That, notwithstanding the possibility of underlying general factors, cancer may be regarded as local in its beginning and may be so thoroughly removed in its incipiency that the chances in favor of its non-recurrence are excellent.

That, when once cancer has advanced beyond the stage of cure, suffering in many cases may be palliated and life prolonged, by surgical and, possibly, other means.

That, while other methods of treatment may, in some cases, offer hope for the cancer victim, surgery for the great majority of operable cases affords the surest cure.

That, there is strong evidence to show that cancer can be diminished by the eradication of such predisposing factors in its production as: general lowered nutrition, chronic acidosis, chronic inflammation and irritation, and repeated acute trauma, cicatricial tissue (lupus, scars, burns, etc.), benign tumors, warts, moles, birthmarks, etc., abnormal discharges, particularly if blood-stained. Such occupations as working in pitch, tar, paraffin, analin, soot, and with X-rays or radium, if not safeguarded, are conducive to the production of cancer.

That, while there is some evidence of an apparent statistical increase in cancer mortality, such evidence is inconclusive and does not justify cause for undue alarm.

That, it would promote health results if each person would submit to a periodic physical examination.

While in a review of the present status of the cancer situation it is necessary to take cognizance of the important phases of research—in etiology, prevention and treatment (biotherapy, radiology and surgery)—there has been no vitally important discovery concerning cancer, within a decade, which has changed the aspects of the problem as known to the modern scientific world. New theories (discussed in the above text) relating to the etiology of cancer have been presented. None has been substantiated. New forms of treatment have been indicated—particularly along the line of biotherapy, but there is no conclusive proof that any one of these will predetermine, prevent, or cure cancer. Radiologists have worked out new methods of technique for the application of radium and X-ray in the treatment of malignancy, but there is no consensus of scientific opinion on the relative value of X-ray, or radium, versus surgery in cancer. Statistics vary according to the viewpoint of the writer. However, in the two sites of malignancy most frequently rayed—the breast and the uterus—the collective evidence (as quoted above) plainly indicates the superiority of surgery over radiation and what is true of these areas, doubtless, is true of other accessible areas of the human body. Superficial growths and post-operative lesions may yield to radium and X-ray, but in deep-seated malignancy the method of choice is surgery—early and adequate surgery—and perfected surgery is the surest means known today of reducing the mortality from cancer.

HYPERTENSION*

JOHN T. KAYE, M. D.

MENOMINEE, MICH.

In this paper an attempt will be made to present a few of the salient features of hypertension. The study of hypertension is of very recent origin. Osler in his 1901 edition makes no mention of hypertension as such. He mentions that in arterio-sclerosis an increased tension is to be expected. This he estimates with the fingers.

The etiology of hypertension is still in dispute. American observers classify hypertension into toxic, cardiac, renal and arterial types. Certain of the French school deny this and state that hypertension is due to over activity of the adrenal glands and that the pathologic changes found in liver, heart, kidney and blood vessels are the result of the high blood pressure and not the cause of it. Hypertension is also found associated with various infections and toxemias.

For clinical purposes we must have some kind of classification. That of Martinet is here followed. He divides hypertension into plethoric, angiospastic, nephritic and arterio sclerotic types.

PLETHORIC TYPE

The term plethora applies to a very clear cut and frequent clinical state. The plethoric subject is not an ill person in the accepted sense of the word. He may have occasional slight indispositions such as skin rashes and hemorrhoids. He consumes large amounts of food, his digestion is perfect. He possesses abundant vitality. He takes in large quantities of fluid and so is polyuric. He has a ruddy complexion and seems to be in robust health. Without being obese he is distinctly over weight. He has great endurance, is superactive and does a prodigious amount of work.

Thus we may say that the plethoric individual without being at all ill is super-normal, a superman from the physiologic standpoint. The heart is unusually powerful and usually is hypertrophied. This is reflected in a heightened pulse pressure. The kidneys eliminate increased amounts of water, salts, urea, uric acid, etc. The digestive glands, overly supplied with blood are over active in their secretion, with resulting polyphagia, polydipsia, polyuria, plethora, etc. This is indeed the hypertension of the well fed, a hypertension deluxe.

Right here may be quoted an extract

from George Cheyne. "Every wise man after fifty ought to begin and lessen at least the quantity of his ailment, and if he would continue free from great and dangerous distempers and preserve his senses and faculties clear to the last, he ought every seven years go on abating gradually and sensibly and at last descend out of life as he ascended into it, even into a child's diet." In other words—We eat too much after forty.

Our plethoric subject is a candidate for obesity, diabetes and gout. He lays himself open to all of the cardio-renal disorders. He probably already shows many pathologic changes in the cardio-vascular system. In these cases we may discover by urinalysis and syphonomanometer early changes and thus by early discovery we may rectify them with much greater certainty.

ANGIOSPASTIC TYPE

This stage frequently is intermediate between the simple plethora and the cardio-renal stage. In other words it is the stage of pre-sclerosis. This stage usually occurs 5 years after the onset. The irremediable stage of sclerosis comes 10 to 15 years after the onset. This stage is characterized by an absolute instability or variability in all its phases—pulse rate, systolic and pulse pressures, viscosity and urinary output. This is not met with in either the plethoric stage—normal from the circulatory standpoint—nor in the subsequent stage where pathological changes have already taken place. In the first stage compensation is acquired by a general and regular functional hypertrophy. In the sclerotic stage the organism moves along for better or worse with permanent lesions constituting a permanent infirmity.

But in the angio spastic stage the organism not yet permanently altered, is not resigned to its fate. By compensatory hypertrophy it tries to stave off an approaching collapse. Sudden attacks of myocardial weakness, angina, edema, etc., are significant of this stage. High tension and cardiac protests against renal and peripheral back pressure are the last cry before the onset of incurable sclerosis.

NEPHRITIS

The marked influence of nephritis in causing high blood pressure has long been known. It makes no difference whether the nephritis is acute or chronic, of infectious or toxic origin. In this class also may be placed the high tensions of gout, lead poisoning, scarlet fever, diphtheria, typhoid, etc.

* Read at the thirty-first annual meeting of the Upper Peninsula Medical Society at Newbury, Michigan, August first and second, 1928.

ARTERIOSCLEROSIS

Plethora, angiospasm, and infection, whether they cause preliminary renal changes or not, and whether they are present alone or in combination, inevitably induce degeneration of the arterial coats and so produce arterio-sclerosis or arterio-renal sclerosis. Here continuous elevation of blood pressure is the rule although the old rule, high blood pressure = arterio-sclerosis is not manifestly true. Here we find evidences of peripheral sclerosis, chronic aortitis, cardiac hypertrophy and interstitial nephritis.

TREATMENT

High blood pressure is not a disease but a symptom of many diseases of different pathology. High blood pressure being compensatory there is no medicine to lower it unless it is in itself dangerous. Thus there is no specific for high blood pressure, and even no single treatment for it. In general it may be stated that there is a certain low limit of high blood pressure beyond which the systolic pressure may be lowered only by upsetting the cardio-vascular balance to the detriment of the myocardium and transforming the case from one of compensated high blood pressure to one of cardiac insufficiency. Any lowering of systolic pressure which does not cause a change or is accompanied by a rise in the diastolic pressure means a weakening myo-cardium and is of ominous significance. Where the diastolic pressure lowers with the systolic pressure the prognosis is better.

There should generally be a sharp reduction in the total amount of food taken. The amount of restriction should be based on the physical type, habits and general activity of the patient in question. Most of them over-eat absolutely. The total daily intake of protein in a person in normal health may be stated to be 90 gms. There is advantage in restricting the daily protein intake in hypertensive cases to below this amount. In severe renal cases the protein should be restricted to 50 or even 40 gms. daily. We may be more liberal in the vascular than in the renal cases, especially if there is a fat or carbo-hydrate intolerance. More boiled meat may be allowed than broiled for the animal extractions raise blood pressure. Cereals, green vegetables, fruits and starchy articles should make up the bulk of the diet. Coffee and alcohol should be forbidden.

A strict milk diet is not suitable as a continuous diet in high blood pressure

cases. Three liters of milk are required to provide enough calories. This contains 120 gms. of cassein which is excessive and likewise too much water. In emergencies where uremia or cerebral hemorrhage is to be feared a diet of milk and cereal is very often of utmost service.

If the heart and kidneys are not affected the amount of fluid ingested has no effect on the blood pressure. Thus in these cases large amounts of water may be given with benefit. When, however, there is cardio-renal insufficiency, restriction of fluids should be prescribed the amount being kept below 1200 cc. Salt should be absolutely forbidden if there is any edema. In any event the addition of salt to cooked foods should be forbidden.

Physical therapy may be employed as follows: Tepid sponge baths and showers for the angio-spastic and sclerotic; cold sponge baths and douches for the plethoric type. Carbonated baths as well as massage may be employed in all cases. The gentlest exercise, such as walking, may be prescribed for the sclerotic; moderately active exercise, such as horseback and golf for the angio-spastic type; more violent forms, such as gymnastics, running or swimming for the plethoric. High frequency is useful in angio-spastic, but of doubtful value in sclerosis, and no value in plethoric.

DRUG THERAPY

Iodine and iodides are useful in plethora of moderate use in angio-spasm and dangerous in sclerosis.

Uric acid solvents may be used to advantage in plethora. Sedatives and hypnotics are useful in all cases at different times; diuretics in cardio-renal cases; purgatives in all cases. Amyl nitrite and nitro-glycerine in anginal attacks; the other nitrites are of doubtful efficacy and are actually toxic to heart muscle. Venesection is useful in emergencies in all cases.

PROGNOSIS

The risks of hypertension are three: Uremia, cardiac failure and cerebral hemorrhage. An analysis of a large number of cases shows the cause of death to be—cardiac failure 36 per cent, uremia 36 per cent, and cerebral hemorrhage 14 per cent. The duration of life varies from 4 months to 11 years, with a little less than 4 years the average.

The conditions on which an individual prognosis is made are three: (1) Height of the pressure. Examination of a large number of insurance cases show that when

the pressure is above 150 mm. Hg. the mortality is 35 per cent in excess of the average. Where it is above 170 mm. Hg. the mortality is 400 per cent above the average. To repeat again the prognosis is very grave when both systolic and diastolic pressure are high. Conversely a fall in pressure is very serious when it portends an approaching cardiac failure. (2) The cause and causes. As a general rule the more obvious the renal or arterial lesions are to the clinician the worse the prognosis. There is still hope in the plethoric and angio-spastic types if treatment is begun in time. (3) The general symptoms. Each of the three terminal catastrophes are foreshadowed by events, which may appear trifling in themselves, but are of the utmost importance in watching for the final downfall. Increasing breathlessness, periodic dyspnea, edema about the ankles, pre-cardial pain and gallup rythm show an approaching cardiac failure. Cerebral hemorrhage is heralded by two sets of phenomina—hemorrhages elsewhere (nose, retina) in cerebral symptoms (headache, vertigo, mental confusion, transient palsies, etc.) The transient palsies are of the gravest significance—temporary aphasia, heminopia, strabismus, hemiplegia. Polyuria, early morning headache, and eye symptoms are the precursors of uremia.

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NEURO-SURGERY OF THE VEGETATIVE NERVOUS SYSTEM*

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By the title, Neuro-Surgery of the Vegetative Nervous System, we mean the application of surgery as a therapeutic measure to conditions which may be due to (1) involvement of that portion of the nervous system which controls trophic or vegetative function, and (2) to conditions due to other causes and which may be relieved by surgical interference with this system. For example, this system regulates the blood supply to the various parts of the body and in case of spasm of the blood vessels due to excessive irritability or dis-

ordered function of this system relief may be obtained by an attack upon it by either drug or surgical therapy, and a cure is often effected. This is an example of a condition resulting from involvement of this system. Intractable pain as in cases of pelvic carcinoma is an example of a condition due to other causes in which pain can be permanently relieved by an attack upon the vegetative or sympathetic system.

The fundamental facts which form a basis for the application of surgery to this system, are these: Practically all of our therapy for diseased conditions is directed towards the vegetative nervous system. By it we endeavor to produce blood pressure changes; e. g. Ischaemia, hyperaemia; increase or decrease gastro-intestinal motility; increase or decrease secretions; increase or decrease the heart rate; to lower fever; relieve pain, etc., and these changes can only be produced by drug or physical therapy which influences the vegetative nervous system.

But there are a great many conditions due to involvement of this system which do not yield to drug therapy, or if they do they require the continuous use of drugs. For some of these, surgical interference offers permanent relief.

Now, you may ask, why does surgery produce the same effect as drugs? The reason is simple. The vegetative nervous system consists of three physiological elements: They are (1) Motor, (2) Inhibitory, and (3) Sensory. Drugs may stimulate the motor element, as for example pilocarpine; or they may influence inhibition and cause relaxation, as for example atropine. Now then, we can produce the same effects by surgical attack and the results are much more permanent. This is done by the interruption of the nerves to the part which it is our desire to influence. But you reply that this results in paralysis. Our answer is that it does not because all of the muscles supplied by the

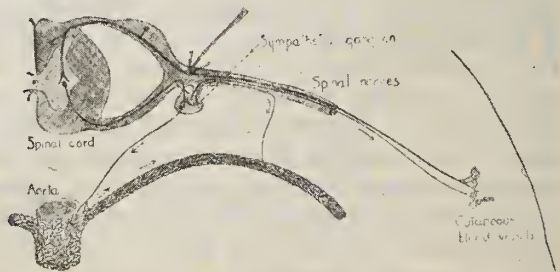


Diagram of the innervation of the blood vessels. The arrows with broken shafts indicate the path for vasoconstrictor impulses according to the theory of Leriche.

* Read at the thirty-first annual meeting of the Upper Peninsular Medical Society at Newbury, Michigan, August first and second, 1928.

sympathetic nerves are plain or visceral muscles and one of the intrinsic physiological properties of this muscle is that of automatic rhythmic contractility; because of this property, visceral muscle, when all of its nerve connections are severed, begins to contract rhythmically, and continuously, and like the heart muscle it does not go into a state of fatigue. If it were not for this physiological property of visceral muscle, surgery of the sympathetic system would be absolutely useless.

With this brief statement of the basis for the surgical therapy of the vegetative nervous system let us note briefly its application: Neuro-surgical methods may be and are applied to the visceral nervous system for affections of the eye as in glaucoma, and exophthalmos; to the neck for exophthalmic goitre; the lung for asthma, tuberculosis, bronchiectasis, pulmonary gangrene, and hiccough; the heart for angina pectoris; the blood vessels for Raynaud's disease, Buerger's disease, endarteritis obliterans, erythromelalgia and hypertension; to the skin for indolent ulcers, varicose ulcers, and X-ray burns; to the muscles for spasticity and Little's disease; the joints for chronic arthritis deformans; to the gastrointestinal tract for gastric crises in tabes, chronic painful gastro- and pyloro-spasm and Hirschprung's disease and ulcer.

In the surgical treatment of the conditions just enumerated we find upon physiological analysis that we endeavor to produce the following effects:

I. To relax (1) the blood vessel walls in Raynaud's disease, Buerger's disease, endarteritis obliterans, hypertension, indolent ulcers, varicose ulcers, chronic arthritis deformans, and X-ray burns, (2) the gutwalls in gastro- and pyloro-spasm and Hirschprung's disease, (3) the heart in angina pectoris, (4) orbital muscles in exophthalmos, (5) lung musculature in asthma, tuberculosis, bronchiectasis, and pulmonary gangrene, (6) voluntary muscle in Little's disease.

II. To interrupt the pain paths in angina pectoris and intractable pain as in the various types of sympathetic neuralgia.

III. To lessen secretions in glaucoma and chronic hyperhidrosis.

With these remarks as a basis let us note the surgical application to the conditions as outlined.

THE EYE IN GLAUCOMA

Jonesco first used the operation in which he excised the superior cervical ganglion

for glaucoma. By 1900 the operation had gained so much favor that Ball at that time drew the following conclusions: (1) "That excision of the superior cervical ganglion is the most valuable procedure in the treatment of glaucoma." (2) "It is more applicable in treating glaucoma simplex than inflammatory glaucoma." (3) If no results are obtained in the inflammatory type from indectomy then excision of the superior cervical sympathetic ganglion should be done." (4) "In cases of absolute glaucoma with pain, the operation of superior cervical symathectomy is to be tried before operating on the eyeball, etc." He claims to have found pathological changes in the ganglion sufficient to warrant this conclusion as well as his clinical results.

In 1904 Wilder reported 15 of 38 cases improved by the operation, Rohmer 48 of 114 and Loring claimed improvement in 70 per cent. In 1906 Gregg was a strong advocate of it, Jonesco had reported 30 out of 35 as improved and Blair because of his own and having in mind the cases of Wilder, Rohmer, Loring, Axenfeld, Weeks, Savage, Gregg, Abadie and others endorsed it. Black thought he had formulated a rule by which he could tell when it was indicated by the action of eserene.

However, the work was purely empirical except for some vague pathology, so Ball's enthusiasm waned until he finally tabooed the operation but in a recent paper he thinks it worthy of study. Now Sluder has discovered a connection between Meckle's ganglion and the ciliary body and is now treating glaucoma by alcoholic injection of the sphenopalatine ganglion. Byrd reports excellent results recently obtained by treating the "nose ganglia," and



Relation of the middle cervical sympathetic ganglion to the inferior thyroid artery.

Belaëff is having success in treating acute cases. So again an advance in the knowledge of the physiology of the visceral nervous system has brought the eye surgeons to a problem once solved but now to be worked over again on a firmer basis. So that we feel that in certain types of glaucoma neuro-surgery does offer some hope after all other measures have failed, but the attack should be made upon Meckle's ganglion.

The other eye condition—exophthalmos may be considered with exophthalmic goitre. The syndrome of this condition exactly fits into an excitatory disturbance of the cervical sympathetic system. Trousseau in 1860 advised an operation on the sympathetic for exophthalmic goitre. That stimulation of the cervical sympathetic caused exophthalmos was first observed in 1873. Claude Bernard's experiments in 1882 confirmed it. However, it was not until 1896 that Jaboulay did the first operation. In 1914 C. H. Mayo published an elaborate paper advocating the operation and gave the technique. He notes having observed better results when he combined a sympathetomy with a ligation of the superior thyroid artery. Leriche reports a similar result. Of his 159 cases of cervical sympathetomy for a multitude of ailments Jonesco reported 25 good results on exophthalmic goitre (1906) and Reinhard in 1923 says "exophthalmic goitre is entirely due to some abnormality of sympathetic innervation". Crile says "the greater part of the benefit of ligation is due to the break in the sympathetic nerve supply since the principal sympathetic nerves run on the artery". Odermott calls attention to the fact that under local anesthesia the ligation of a stripped artery is not as painful as one which includes the fascia around the artery. Let me say therefore that the exophthalmos can be relieved early by an excision of the superior cervical ganglion and the results are more satisfactory if done before the retrobulbar space fills in with fat and before the muscle in Tenon's capsule hypertrophies. A complete knowledge of the physiology of exophthalmic goitre is not yet at hand, so that empirical and palliative measures are still in use. Why may not one of these be offered by neuro-surgery?

THE LUNG

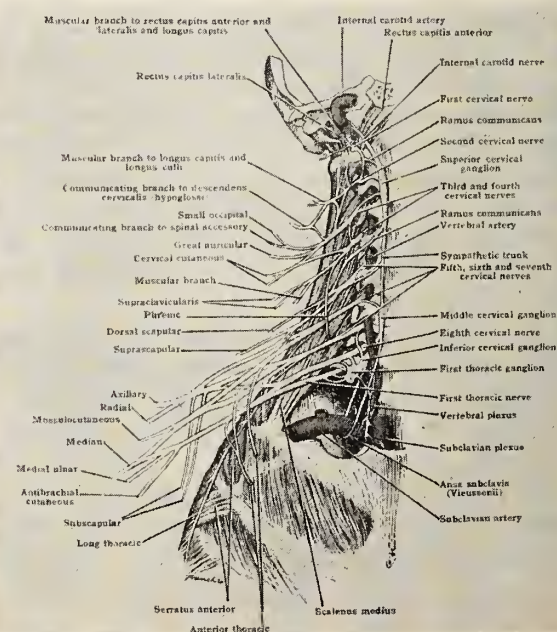
Asthma is in some instances due to a vago-neurosis or vago-tonia, at other times it is a reflex condition mediated through the head ganglia. The former condition involving the motor or constrictor elements

(vagus) the latter affecting the afferent element and inhibiting the inhibitor or relaxor element. I'm not considering the protein sensitization element in asthma although in these cases the nervous mechanism is involved. Kern of Philadelphia has cut the left vagus for asthma. Kummel in four cases between the ages of 23 and 65, cut the vagus with a failure in one case and complete relief in three. In 1924 Kaess reported five cases with relief in all. Florecken reports four cases with three relieved. Genersich combined a double cervical sympathetomy with section of the two to five costal cartilages on the right side, and the patient was completely relieved. Kappis practices the procedure of cutting the right vagus below the recurrent laryngeal nerve.

Upon bronchoscopic examination a distinct difference can be noticed in the diameter of the bronchi on the operated and non-operated side. Here again the surgeons (except Kappis) are lagging behind their anatomy in not sparing the recurrent laryngeal by attacking the vagus in the thorax. They are all operating in the neck. Surgery here should bring as good results as it has in Raynaud's disease, Angina Pectoris, and in the next condition to be mentioned—pathological lung cavities. So it is mentioned as a measure to be considered.

PHRENICOTOMY

Viscontini proposed the operation of cutting the phrenic nerve in pulmonary tuberculosis; he operated eight cases and improvement was noted in five. He recom-



After Toldt, "Atlas of Human Anatomy," Rebman, London and New York.

mends it in unilateral tuberculosis in its early stage, and in cases where artificial pneumothorax is not feasible. He also used it in cardiac disturbances due to pleuro-cardiac adhesions, in pulmonary gangrene, bronchiectasis and persistent hiccough in which it must be bilateral. Here again avulsion of the nerve, not a procedure without some hazard, is being done by some when a resection of a segment will serve the same purpose.

Some authors have called the sympathetic component of the phrenic an accessory phrenic and have noted that when this is not cut the results are not so beneficial. It may be that the section of the sympathetic component is the important thing because it supplies the plain muscle of the visceral and diaphragmatic pleura and pericardium. It looks again as if the surgeon is a little behind on his physiology and anatomy. But in certain types of tubercular cases phrenicotomy is a valuable therapeutic measure and deserves recommendation.

ANGINA PECTORIS

It is rather singular that this condition was one of the last for which Jonesco recommended cervical sympathetomy when Francois Franck had suggested it to him 17 years before he did it in 1916. He removed the middle and inferior cervical, and the stellate ganglia, the cervical sympathetic chain, and the sympathetic plexuses from the inferior thyroid and vertebral arteries on the left side. Note that he left the superior cervical ganglion the one to be removed if any. This was certainly an elaborate and delicate procedure. In 1920 the patient was still free from all symptoms with normal heart, pulse, and respiration. The x-ray showed a dilated aorta and a broadened heart shadow.

In his second case, a man 54, he only resected the left nerve and obtained the same result.

Renon accidentally removed the sympathetic plexus (the aortic probably) in a case of aneurysm of the aorta in making repair with fascia lata and the patient was relieved of pain, so Delorme advised this for relief of pain in aortitis.

In 1923 Coffey and Brown reported six cases with one death and five improvements from excising the superior cervical ganglion only. At present Coffey excises this ganglion and cuts the superior cardiac nerve to the vagus. A rather puzzling statement to one who is familiar with the anatomy of these structures. It has been

shown that fibers go from the superior cervical ganglion to the aorta. The basis for this operation is the following:

In 1866 Ludwig and Cyon discovered a depressor nerve to the heart and this was regarded by them as a part of the vagus, and later physiologists haven't learned that it isn't. This nerve is from the sympathetic through the superior cervical ganglion and in addition to transmitting depressor impulses it also carries afferent pain impulses. At present the consensus of opinion seems to be that the afferent impulses in angina are the chief cause of the trouble.

The theories of the disease are two. (1) According to MacKenzie and Danielopolu it is cardiac fatigue. (2) According to Alburt, Vaquez and Wenckebach it is aortic disease. Be that as it may, the four operations for the disease at present are as follows:

(1) Jonesco's—extirpation of the middle, and inferior cervical and stellate ganglia with or without severance of the superior cardiac nerve.

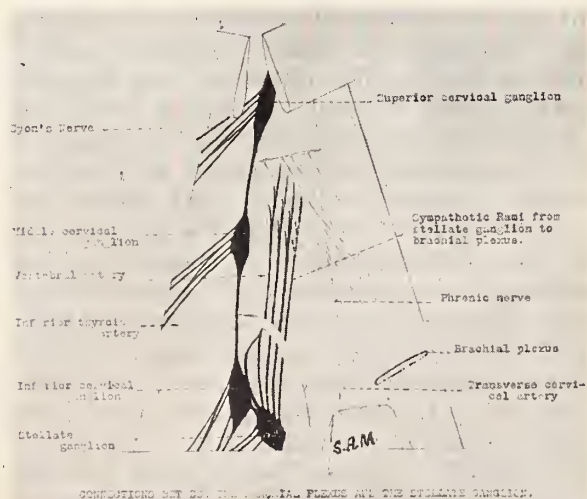
(2) Brunning's—extirpation of three cervical and the stellate ganglion.

(3) Coffey and Brown—excision of the superior cervical ganglion and section of the superior cardiac nerve.

(4) Hoffer and Eppinger—section of the depressor nerve.

I might say in passing that in visiting Leriche's clinic last summer I found that he recognizes two types of angina—a cervical and pectoral. For the cervical, he sections the superior cardiac nerve and for the pectoral the inferior cardiac nerves. Lilienthal has also described two types, one of which he calls substernal and the other abdominal.

At present it begins to look as if only the



afferent nerve of the heart need be cut to relieve angina since Mosser, Jonesco, Montgomery, Tuffier, Brunning, Borchard, Ried, Friedlander, Smith, Diez, Kappis, Pleth, Hoffer, Eppinger, Tschermak, and others are of this opinion and the physiological as well as the clinical facts point in that direction. I do not believe that any known therapeutic measure has brought more to ease the mind and body of a heart-sick individual than has the operation for angina pectoris and the Hofer-Eppinger operation is simple and can be done in a few minutes under a local anaesthetic.

If what we have said about angina pectoris is true then the results obtained in conditions mentioned thus far have been due to two things, the interruption of *pain paths* and relaxation of *plain muscle*. This is the gist of the therapeutic effect of visceral nerve surgery which is again beautifully demonstrated in its application to the blood vessels.

RAYNAUD'S DISEASE

In 1851 Claude Bernard noticed that when the cervical sympathetic is cut on one side in the neck of a rabbit that the rabbit's ear on that side is warmer than the one on the other side. This was found to be due to the fact that the blood vessels on the cut side dilate, and he also noticed that if the distal cut ends were stimulated that the ear became blanched.

Brown-Sequard confirmed this observation and also discovered fibers which if stimulated caused dilatation of blood vessels. Thus were the vaso-motor nerves discovered.

Leriche has summarized the effect of the sympathetic disturbance upon blood vessels as follows: (a) *A pure reaction*—resulting in painful ischemia followed by dilatation. (b) *A disturbed reaction*—resulting in various phenomena. Under the first condition he places "stupeur arterielle" or Raynaud's disease. He reports several cases where a spasm of the blood vessels produced gangrene. I haven't time to go into further detail with reference to Raynaud's disease and sympathectomy except to say that the proponents of peri-arteriorrhaphy for blood vessel pathology recommend it for Raynaud's disease, Berger's disease, erythromelalgia, endarteritis obliterans, causalgia, indolent ulcers, varicose ulcers, chronic arthritis deformans, painful stump and acrocyanosis.

Personally I do not believe that the underlying causative factors or physiological

disturbances in all of these conditions can be removed by directing a surgical attack upon the sympathetic system. However, I am convinced that it is of value in Raynaud's disease and causalgia. So that in order to select the case which will be benefited by surgery a very careful differential diagnosis must be made.

But what I do want to emphasize is this. That I believe a *ramisectomy* is sufficient to give the desired result, and at most a ramisectomy plus a ganglionectomy, and that the blood vessels should not be disturbed by doing a peri-arteriorrhaphy.

We have demonstrated to our entire satisfaction at Receiving hospital that ramisectomy even in the cervical region (where it is claimed by some neuro surgeons including Adson of the Mayo clinic that it is not effective) gives results identical with the more elaborate operation. The rami to the brachial plexus can be isolated and very easily cut. The work of Royle and Hunter gives ample evidence of the effectiveness of ramisectomy for the lower extremity.

Another proof is that in treating varicose and indolent ulcers by periarteriorrhaphy and skin grafting Leriche tells me that when he fails with stripping the artery that he then resorts to ramisectomy. Incidentally very happy results can be obtained by treating ulcers in this way. Leriche is preparing a paper for publication giving his recent results in the use of this method. The most magical results can be obtained in treating ulcers from X-ray burns by a sympathetic neurectomy. Even as conservative an internist as Barker commends it so I feel that ramisectomy is the operation of choice.

The most recent application of ramisectomy has been to cases of Hirschprung's disease, or megacolon, with very promising results.

VAGOTOMY

Braun some time ago proposed the division of the gastro-colic omentum and gastro-hepatic ligament in the region of the pylorus to alleviate painful stomach spasm.

Kostling did a vagotomy below the diaphragm on three cases of long recurring painful spasms of the stomach with a complete cure in all cases. Operation for gastric-crises in tabes has brought relief in several instances.

One other condition to be considered under this head is *spasticity*. This was thoroughly worked out on a scientific basis by a large number of investigators before its application. The cases for operation

must be carefully chosen. The spasticity must be of cerebral origin and unassociated with tremor, and the patient's should be of good mentality, and able to stand and sit alone. An operation is of value when the stiffness interferes with the movements of one's arms and legs. Contracture deformities must be corrected by orthopedic measures which may include the Stofell operation. The operation consists of ramisectomy from the second lumbar to below the fourth lumbar ganglia, dividing all of the gray rami, for the leg region; for the upper extremity a ramisectomy of the fibers to the brachial plexus is done. Within the scope of the application of this operation is Little's disease. This is a field that holds many possibilities yet to be worked out and applied but already it is yielding some satisfying results.

In conclusion: While we shall continue the practice of attacking the ganglia and rami for neuralgias of the head and deep seated conditions such as angina pectoris, we have already begun the alcoholic injection of the blood vessel sheath for peripheral conditions such as leg and foot ulcers, and angiospasm of the peripheral vessels. Later we may apply this to the treatment of certain types of head pains.

We feel very strongly that as a more refined knowledge of the function of the sympathetic system is acquired that further refinements in surgical technique will follow, and that more simple operations will be used. We are not proposing neuro-surgical therapy as a cure for all of the conditions mentioned but we do feel that the general practitioner should know something about the application of neuro-surgery to the conditions mentioned. We also feel that the patient suffering from diseases in which relief has been obtained by neuro-surgical methods is entitled to this knowledge and it is the physician's duty to inform him.

A COMPLICATION OF PULMONARY TUBERCULOSIS AND ITS TREATMENT*

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In the light of our present knowledge of the different stages of pulmonary tuberculosis, our procedure in treatment, even in advanced cases, would be plain, were it not

for the complications. Empyema is one of such complications, always dreaded because of its stubbornness in responding to treatment. Though, fortunately, not often found, its presence usually makes the prognosis unfavorable. One sees in sanatorium work patients with pleural fistulas of several years duration following attempts with surgical treatment. These patients achieve a certain improvement in their general condition under the general hygienic-dietetic treatment of the sanatorium, the fistula ceases draining for a period, and then, with no appreciable cause, general discomfort returns, the pleural sac refills, and the fistula reopens with pus draining. This condition repeats itself, sometimes for years, until a mixed infection, with concurrent cachexia terminates the case.

THE DIAGNOSIS EASY

Tuberculosis empyema is usually due to breaking down of contiguous tuberculous foci. Diagnosis is easily made by a physical examination with aid of the x-ray and of the laboratory. We all know the physical signs: lack of expansion of the chest where the effusion is lodged, this emithorax being larger than the opposite side, widening or bulging of the intercostal spaces, absence of tactile fremitus, flatness on percussion over the effusion, with change in the area of flatness with change of position of the patient's chest, tympanism above the level of the fluid, absence of breath sounds in the area of flatness, displacement of the heart to the opposite side.

Fluroscopy and x-ray plates will show clearly an area of heavy density with a fluid level and the displacement of the mediastinum. An exploratory puncture will show the nature of the exudate. It may be sterile, may contain only tubercle bacilli, or these with other microorganisms. It may only contain lymphocytes or show many polynuclears. This seems to be very important for the prognosis: a mixed infection and the predominance of polynuclears has a more serious prognosis.

WATCHFUL WAITING ADVISABLE

The orthodox treatment of tuberculous empyema is that of a watchful waiting. Tapping of the chest usually makes conditions worse. This can be easily understood: the removal of the fluid removes also the mechanical compression of the diseased lung, with following reactivation of the lesions and increased toxemia. When, however, there is continuous tuberculous

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toxemia with dyspnoea and embarrassment of contiguous organs, especially the heart, the fluid should be drained. Other accepted treatments are, paracentesis plain or combined with artificial pneumothorax, flushing of the pleural cavity with antiseptic solutions, like Dakin's, until this solution returns clear; rib resection, especially when the primary focus is an osteomyelitic rib; actual cautery or excision of the pleural focus of infection; thoracoplasty. Each of these different treatments have their indications, but the final results are seldom satisfactory.

Following is the report of a case where oleothorax was used:

Miss E. B., a house-maid, American born of Swedish parents, age 18, single, admitted in Morgan Heights Sanatorium May 2, 1927 with diagnosis of pulmonary tuberculosis.

Family History: Father and mother living and well, two brothers and six sisters living and well, two brothers died of tuberculosis several years ago, one sister died of hydrocephalus two years ago, and one sister, a terminal case of tuberculosis, in Morgan Heights Sanatorium. (This latter died June 30, 1927).

Previous History: Habits and condition of health as a child, good. Previous diseases: Measles and tonsillitis (operated in 1925). Menstruation started at 14, since regular.

Present History: Had pneumonia in January 1927. Losing strength and weight since. Has occasional dry cough, dyspnoea on exertion, slight hoarseness. Sleep and appetite good. Bowels and micturition normal. Height: 57½ inches, weight 132 pounds, clothed (average weight for age and height 136 pounds). Temperature 99.4, pulse 124, respiration 24.

Physical Examination: General development, good. Nutrition, fair. Complexion, sallow. Mucous membranes, pale. Glands, negative. Eyes, ears, nose and throat negative. Abdomen, negative.

Heart: Displayed towards left, apex in 5th I. C. S. Sounds all normal, excepting for a soft systolic murmur at apex. Apical point of maximum intensity two inches outside of nipple line.

Lungs: Inspection: Chest of conical shape, fairly well developed and poorly nourished, in contrast with the rest of patient's body. Right emithorax does not show any expansion, and intercostal spaces are bulging.

Palpation: Absence of tactile fremitus all over right chest, normal at left.

Percussion: Tympanitic over right apex. Flatness from second rib to base anteriorly and practically all over posteriorly. Left chest somewhat hyper-resonant, excepting for heart dullness that reaches anterior axillary line at fifth I. C. S.

Auscultation: Very faint B. S. in right apex, absent B. S. to base. Harsh B. S. in left lung, especially in apex and at base. Voice conduction abolished at right, normal left. No whisper transmission or whisper pectoriloquy at right, normal whisper transmission at left.

X-ray taken May 3, 1927 shows right apex clear with a dense shadow below first rib, right. Left lung transparencies are normal, though somewhat darker field (emphysematous) at left base. Heart shadow appears displaced to left with apex 1½

inches from outer chest wall; arch of the aorta protrudes 1½ inches from outer border of left spine in second I. C. S.

Sputum brought to the laboratory was mainly saliva and was negative for tubercle bacilli on repeated examination. Urine: straw, turbid, acid, sp. gr. 1006, albumen gm. 0.35, sugar negative, no casts. Pleural exudate, withdrawn for diagnostic purposes, was thick seropus, positive for tubercle bacilli (Gaffky VIII), no secondary organism present, many pus lymphocytes.

Diagnosis: Tubercular empyema, right; compensatory emphysema, left. Mitral insufficiency. Patient was put to bed, tr. iodine, two drops in milk t. i. d., a. c., but, as she was losing weight, temperature persistently abnormal, pulse 92-128, dyspnoea present on slight exertion and heart murmur also persistent, on June 6th, 1927 we aspirated 650 c.c. of seropurulent fluid from right pleura and injected 400 c.c. of sterile air. Manometer reading was lost. Temperature that p. m. was 100, but pulse 104, respiration 24. A study of x-rays then showed collapse of right lung. Patient comfortable.

June 9th, 2300 c.c. of seropurulent fluid were aspirated and 1000 c.c. of air injected. Pressure after treatment 3½ negative. Patient comfortable. Fluoroscopy immediately after treatment showed collapse of right lung and line of fluid down to level of sixth rib, right.

Aspiration of 2400 c.c. of same fluid was repeated June 16th, and 1000 c.c. of air injected. Pressure neutral. X-ray showed same findings of former fluoroscopy. Patient comfortable.

After this we tried to keep a neutral intrathoracic pressure, removing fluid and injecting sterile air, until towards the end of July patient started to complain of pain in left chest, great dyspnoea, cough, difficulty in raising sputum, temperature 101, pulse 120, respiration 28. By the first of August temperature was 100 in a. m. and 103 in p. m. and kept with this high curve until August 11th, when it started to go back around normal. Examination August 1st showed clearly a pneumonic process of the left lower lobe; this was confirmed by an x-ray plate taken August 10, 1927. Sputum, mucoid was positive for the first time. Digitalis and stimulants were used as medication. September 1, 1927 patient was again acutely ill with temperature of 102.6 in a. m. and 104.6 in p. m. Pulse 128-160, respiration 32-40. Re-examination showed reacutization of pneumonic process in left lower lobe, with dull percussion note and coarse rales. X-ray not taken, because of condition of patient. Patient was very ill until September 14th, when condition subsided by crisis. Weight was 112 pounds. Emesis and diarrhoea also characterized this period of illness. Same condition appeared early in November and towards the middle of it. Aspiration of fluid was continued, but it would return to former levels, although re-expansion of right lung was maintained.

January 1, 1928, in hopes of starting the year right, we wanted to try a new way of combatting this empyema, and oleothorax was resorted to. 1050 c.c. of seropurulent fluid was aspirated and 100 c.c. of gomenolated oil was injected in the pleural cavity. This was done several times until March 8, 1928, when last injection was made. Patient has been normal and inactive since. Examinations since May last shows total absence of pleural fluid, thickening of right pleura, re-expansion of right, and normal condition of left lung. No cough and no expectoration are now

present. Heart is in normal position, sounds are normal, weight has steadily increased until today it is 145 pounds. Patient is an ambulatory case, and has no complaints whatever. She is on regular walking exercise of three hours per day, one hour of occupational therapy, and one hour of light tasks around the hospital. Soon she will be ready for discharge.

I have wanted to report this case on account of the oleothorax with Gomenol. Gomenol is an essential oil, first used by Bertou in France, and afterwards by Kuss in the treatment of pleural effusions. Bertou, in an article published in June 1926 of the *Revue de la Tuberculose*, especially recommends it in primary tuberculous purulent pleurisies, when simple aspiration and replacement by pneumothorax fail to achieve success, and this before too great a thickening of the pleura has occurred. In America it has been used with success in the past years by Matson of Portland, to whom I owe the first information on this method of treatment.

Gomenol is used in 2 to 8 per cent solutions in olive oil, or liquid petrolatum. I used a 5 per cent solution in Squibb's Petrolatum. A needle of 18 gauge was used, in the 6th I. C. S. at a point between middle and posterior axillary lines. The solution heated to body temperature, around 98, was injected slowly, not more than 50 c.c. per minute. Gomenolated oil is slowly absorbed by the pleura in four to ten weeks, according to the amount. Its antiseptic qualities are high and its irritative effects are negligible, if any, when used in proper solution and quantity.

I found it quite essential to first remove all or as much as was possible of the pleural exudate through the needle provided with a stop cock, then to inject the gomenolated oil through this same needle, and at the end of the operation to leave drops of this oil in the tissues while removing the needle thus insuring antisepsis of the chest wall and in order to avoid a fistula. A small pledget of sterile cotton with collodion was enough to close the small needle opening. I have always used the potain and administered the oleothorax with patient in the sitting position in front of the fluoroscope. Of course this patient had the advantage, during her oleothorax, of the hygienic-dietetic treatment of the sanatorium, and this, no doubt, contributed substantially to the success and to the final arrestment of the disease, just as it had contributed to overcoming the fatal family tendencies and previous pneumonic and intestinal complications. It is with intense satisfaction that I see my patient ready to go back to a useful life.

I present this case with the hope that this method be tried in similar conditions and results reported.

AURICULAR FIBRILLATION

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Auricular fibrillation is a disturbance in the regulating mechanism of the heart in which the normal systole of the auricle is replaced by a fibrillary or twitching action of the musculature, the auricle remaining in continuous diastole. In the normally acting heart the impulse originates at the sino-auricular node, situated at the junction of the superior vena cava with the right auricle; from there it spreads in a wave-like motion over the auricle to stimulate the auriculo-ventricular node and cause ventricular contraction. In fibrillation the action is quite different, the impulse following what is called a "circus movement" around the mouths of the superior and inferior vena cava. The impulse travels at a rate of about 450 revolutions a minute and follows a very irregular path, due to the fact that it is necessary that it find muscle fibers that have recovered from the preceeding stimulus and are again receptive to stimulation. The auriculo-ventricular node is unable to transmit all of this rapid-fire of impulses and the result is a rapid and irregular action of the ventricle. The effect from the failure of the auricle to contract is not in itself appreciable, for normally the auricle propels only about one-eighth of the blood flowing into the ventricle, the remainder entering it because of a difference in pressure. The effect on the circulation from fibrillation is due almost entirely to the increased rate and irregularity of the ventricle.

Fibrillation may be permanent or transient, the great majority of cases being permanent. Between sixty and seventy per cent of the cases of heart failure have this disturbance, and of the various disorders of the heart beat forty per cent are of this type. Mitral stenosis is the condition most frequently found associated with fibrillation, and next in frequency comes chronic myocarditis. Hyperthyroidism is often the underlying cause, but here the fibrillation is usually of the transient type. It may also occur in the course of various infections, particularly

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with pneumonia and rheumatic fever. Also it may at times appear in an apparently healthy individual in whom no heart disorder or other disease is discoverable. The age incidence shows the affection in the non-rheumatic group to be mostly in those of advanced age, while in the rheumatic group it is more often found in the third and fourth decades.

The morbid anatomy shows valve lesions—principally mitral, enlargement of the heart, degeneration and fibrosis of the heart muscle, and inflammatory changes. In a small percentage no heart lesions are found post mortem.

The recognition of fibrillation is not difficult in most instances. We find a rapid and grossly irregular heart action, irregular in both time and force. The rate is nearly always over ninety. The count at the apex is nearly always higher than at the wrist, as many of the beats are too weak to reach the wrist. This pulse deficiency becomes greater and the irregularity more pronounced as the rate is increased. The rule, as laid down by Sir Thomas Lewis, is that, given a decompensated heart, grossly irregular in time and force, a rate of over one hundred at the apex, and a pulse deficiency of ten or more beats, in nine cases out of ten it is auricular fibrillation. It is safe in most instances to make the diagnosis on the clinical evidence alone, and only rarely is it necessary to employ graphic methods to confirm the diagnosis. Another characteristic of fibrillation is that the length and strength of a given beat bear no relation to the duration of the preceding pause. In a normal heart a long pause is followed by a strong beat and a short pause by a weak beat. In a fibrillating heart this relation is lost, short pauses may be followed by strong beats and long pauses by feeble beats. There are two forms of irregularity with which fibrillation may be confused, extrasystole and partial heart block. Under the influence of exercise, or the giving of amyl nitrite of belladonna to accelerate the heart rate, these irregularities become less pronounced or are entirely lost, while with fibrillation the irregularity increases with the increase in rate. The irregularity of fibrillation is generally permanent, while the other irregularities come and go. Finally, if with an irregularity as described we have mitral stenosis, chronic myocarditis or hyperthyroidism the diagnosis need not be in doubt.

The symptoms may be mild or grave, or there may be no symptoms, depending on

the rate and degree of irregularity of the heart action, and on the degree of degeneration of the heart muscle. With some patients, if the heart rate is slow and there is little myocardial change, a fairly efficient circulation is maintained over a long period and there may be no symptoms. In a severe case the symptoms are those of circulatory failure—dyspnoea, cyanosis, dropsy, diminished urinary output, congested, enlarged and tender liver, and diminished response of the heart to effort. There may be cough and haemoptysis, and in a small percentage there is embolism. The patient is conscious of the irregularity and of a fluttering sensation in the chest and neck. The onset of fibrillation may be sudden or gradual. The permanent type is often preceded by several paroxysmal attacks before becoming permanent.

The prognosis depends largely on the underlying condition causing the fibrillation, and on the condition of the heart muscle. Chronic myocarditis, especially if there is hypertension, offers a less favorable prognosis than if we have a valvular lesion and only slight myocardial change. The response to treatment largely determines the prognosis, for the outlook is much better when the heart can be slowed to a nearly normal level and kept there. The danger from embolism must be considered, for a thrombus may become dislodged from the clotted blood in the auricular appendices. There is especial danger from this where the normal rhythm is restored after a paroxysmal attack, or when it is restored after treatment with quinine.

In the treatment, rest, diet and drugs are all important. If the rate is not over ninety at the apex with the patient at rest, and there are no symptoms of heart failure, it may only be necessary to limit the physical activities of the patient. If the heart rate is rapid and there are signs of circulatory failure, with edema and hypertension, the patient should be kept in bed, drug therapy instituted, and be put on the Karel diet for from two to seven days. This diet gives a low proteid and low salt intake. After the edema is removed he should be limited to one liter of fluid intake a day and kept on a low proteid and low salt diet. The confinement in bed should be prolonged for some time after the symptoms are relieved.

We need consider only two drugs in the treatment of fibrillation, digitalis and quinidine. Digitalis is the safer and the drug more generally employed. The action of the two differ in that quinidine stops the fibril-

lation of the auricle while digitalis does not, but simply blocks some of the impulses at the auriculo-ventricular node, thus slowing the rate of the ventricle. Quinidine has a two-fold action—it increases the length of the refractory period of the muscle fibers, and thus tends to break up the "circus movement"; it also tends to slow conduction, so if the slowing is sufficient to offset the lengthening of the refractory period fibrillation is not stopped. On this account the action of quinidine is less certain than that of digitalis. If digitalis is used it must be given indefinitely so as to keep the patient digitalized. Some patients are hypersensitive to the action of quinidine and may develop urticaria, headaches, dizziness and other symptoms. The effect from quinidine is rarely permanent and fibrillation returns in the majority of cases. With quinidine there is also danger from embolism as the contraction of the auricle, on the return of normal rhythm, is likely to dislodge thrombi from the auricular appendices and release them into the circulation.

In giving digitalis we give enough to digitalize the patient. For the average patient weighing 150 pounds about two grams of the powdered leaves, or twenty cubic centimeters of the tincture, is required. This should be given in divided doses over a period of two or three days or a week, depending on the urgency of relief. The digitalis pills of one and one-half grains offer a convenient form in which to give it. Give one gram, or ten pills, the first day in divided doses. See the patient the following morning, and if there are no signs of digitalization give one-half gram that day, and the remaining half gram on the third day if necessary. When the heart has been slowed sufficiently, or has become regular, stop the digitalis. If the heart has become regular it may mean that complete heart block has developed, in which case it is dangerous to continue the drug. Never slow the heart to below sixty at the apex. It is well, if possible, to stop the drug before signs of digitalis intoxication appear. The signs of this are that we get a coupling of the beats, the patient feels mean all over, is nauseated, may have vomiting and diarrhea, and may even become delirious. If the patient has had digitalis within seven to ten days previously it is not safe to give it in large doses on account of the danger from intoxication, and not knowing what amount of digitalis is still in the system. It is better then to give one and one-half grains

three times a day. The system excretes one and one-half to two grains of the drug in twenty-four hours, so after the patient has become digitalized it is well to continue with that amount daily as a maintenance dose. If the patient is unconscious or is vomiting, so that digitalis cannot be given by mouth, it can be given intramuscularly, or we can give it by rectum, using the infusion or tincture. If rapid digitalization is indicated it can be given intravenously in the form of digitan or digitofolin, in dosage of one minim per pound of body weight. A very prompt action results after the intravenous dose, the reduction in the heart rate being perceptible within five to ten minutes, with the greatest fall taking place within the first thirty minutes, and after that a gradual fall for about two hours.

In fibrillation the action of digitalis is almost specific. In a patient with fibrillation and a failing circulation its action is most striking. Before giving the drug, if we picture one of the more grave cases, we have cyanosis, dyspnea, general edema, enlarged and congested liver, and excretion of only a few ounces of urine daily. After the patient has become digitalized, the improvement is rapid and marked, he is comfortable, can lie down, breathes easily, passes large quantities of urine, and the edema is rapidly disappearing.

In giving quinidine it is best to first give a trial dose of two grains to determine individual susceptibility. If no untoward symptoms develop it may be continued in doses of five grains every four hours until the normal rhythm returns, which is usually within a few days to a week in cases which respond to this treatment. Quinidine is effective in stopping fibrillation in only about 50 per cent of cases and in the majority of these it recurs sooner or later. Because of the uncertainty of results, and the danger from embolism, it is not so generally used as digitalis.

IODIN IN HYPERTHYROIDISM*

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Some of the members of this Society requested me to discuss iodine hyperthyroidism because of the widespread use of iodine in Michigan and because of its importance as a factor in the cause of hyperthyroidism. This condition of induced hyperthy-

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roidism, as everyone admits, has become extremely prevalent throughout the country during the past few years, and I shall devote most of the time allotted to me to the discussion of this particular phase. I wish also to discuss briefly the use of iodine in exophthalmic goiter and in toxic adenoma.

IODIN AS A CAUSE OF HYPERTHYROIDISM

Kimball reported 309 cases of induced hyperthyroidism observed at the Cleveland clinic, de Quervain 457¹², and at the Jackson Clinic we have seen sixty patients within a short time. This represents but a small number of all the cases, judging from the literature and from communications received from numerous physicians. At the last meeting of the American Association for the Study of Goiter, Plummer challenged the contention that iodine hyperthyroidism is a distinct clinical entity. He maintained that this condition and toxic adenoma are synonymous. It is not my purpose to bring before you this discussion of the rather technical subject of the differential diagnosis of the various forms of toxic goiter. Yet, in order to understand the proper treatment of goiter it is essential to have a clear understanding of its various forms.

In this treatise I am assuming that goiter may be classified into two groups, non-toxic and toxic. In the first group are the simple, adolescent or colloid, and the adenomatous forms. The toxic goiter group is divided into exophthalmic and adenomatous and this is subdivided into toxic adenoma and iodine hyperthyroidism. I realize that perhaps you do not all support this classification, but that some of you agree with Crile and Graham that toxic adenoma and exophthalmic goiter are synonymous.

Leaving aside for the moment the discussion of exophthalmic goiter, it is my contention that an adenomatous goiter does not become toxic in patients less than thirty years old unless this is provoked by the injudicious use of iodine. In other words, toxic adenoma is seen only after the third decade. One must remember that exophthalmic goiter may be superimposed on adenomatous goiter at almost any age and that the association of these types of goiter is commonly observed.

Iodine hyperthyroidism, on the other hand, may occur at almost any age. One of the patients in my series was a girl, aged fifteen, with a large adenomatous goiter that had become toxic after the use

of a patent medicine containing iodine. Another victim was a man sixty-five years old who had taken the same remedy. There is no question that the wholesale distribution of iodine in the country during the past decade, by certain physicians, druggists, and even grocers, is responsible for the large number of cases of this kind. The same condition was found in Switzerland in the nineties following the widespread use of iodine. So common did this become that Kocher repeatedly called attention to the danger of the indiscriminate use of iodine, and Breuer in 1900 gave an excellent description of what he called "iodine Basedow." In fact, so successful were their efforts that physicians generally became afraid to use iodine in hyperthyroidism for fear of accentuating the symptoms. The textbooks and the medical schools of this as well as foreign countries warned against the use of iodine in exophthalmic goiter. Of course, no attempt was made by either foreign or domestic writers to differentiate the various forms of toxic goiter. Consequently the literature contained many reports of supposed cases of exophthalmic goiter or Basedow's disease induced by the use of iodine. It is now recognized that this condition was not exophthalmic goiter, but iodine hyperthyroidism. However, it was not until 1913 that some of this confusion became clarified. At that time Plummer clearly differentiated between exophthalmic goiter and toxic adenoma. While this classification has not been generally approved and is still disputed by many European and American physicians it is gradually gaining international recognition.

In 1924 I⁴ reported a series of eighteen cases of adenomatous goiter in which it was clear that toxic symptoms were induced by the indiscriminate use of iodine. The following year a larger series of thirty-eight cases was reported⁵ and the name, iodine hyperthyroidism, was suggested for this syndrome. It seemed to me that the term, iodine Basedow, as suggested by Breuer, was misleading as this condition was clearly not exophthalmic goiter or Basedow's disease. In the first place the pathologic picture showed no resemblance. The absence of the typical hyperplasia and hypertrophy so characteristic of this condition, except in isolated areas, was apparent. The goiter was typically nodular and asymmetrical rather than smooth, uniform and symmetrical. Clinically, marked points of difference were to be noted. While the history in both was likely

to be acute and of but a few months' duration, patients having exophthalmic goiter seldom, if ever, had received any iodine treatment up to that time. Moreover, if any enlargement of the thyroid had been noted it was of short duration, whereas patients with iodine hyperthyroidism had noticed a goiter for fifteen years or more. Tremor, nervousness, tachycardia, palpitation, and loss of weight occurred in both types, but the characteristically variable and at times ravenous appetite of Basedow's disease was never noted in iodine hyperthyroidism. Nor did the gastro-intestinal crises occur even in fatal cases. I have never observed either exophthalmos, thrills, or bruits in iodine hyperthyroidism, nor has fever been present even in terminal states. Hypertension occurred as in toxic adenoma, but the typically low diastolic pressure of exophthalmic goiter was not found. Finally, hyperthyroidism in exophthalmic goiter could be temporarily controlled by the use of Lugol's solution, whereas iodine naturally aggravated the symptoms of iodine hyperthyroidism. In fact, three cases proceeded to a fatal termination in spite of all medical measures.

Thus it may be readily seen that there is no reason for confusing these two distinct clinical entities any more than there is for mistaking diphtheria for scarlet fever. Is this condition similar to the one Plummer has designated as toxic adenoma? While no points of characteristic difference appear in the pathologic picture, the same is true of non-toxic and toxic adenoma. Clinically, however, I believe that a distinct difference exists and that it is important from a therapeutic standpoint to recognize this difference. There is a high operative risk in the presence of severe, acute iodine hyperthyroidism, just as there would be in a crisis in a case of exophthalmic goiter. No effective pre-operative agent such as Lugol's solution has as yet been discovered for these cases, but in the majority discontinuation of the iodine, quiet, rest, and sedatives will bring about a distinct improvement within two or three weeks, and will greatly lessen the operative risk. Apparently a certain number will proceed to a fatal termination in spite of any medical or surgical measures.

What, then, are the factors that serve to differentiate this syndrome from that of toxic adenoma? In my experience toxic adenoma has never been observed in patients less than thirty years of age. It is a disease of middle life and in a series of

cases that I recently reviewed⁷ the average age was forty-four. While the average age of patients with iodine hyperthyroidism was thirty-five years, the age of 40 per cent of the patients observed was thirty years or less. Two cases occurred in children fourteen years old. In none of these patients was any symptom of hyperthyroidism noticed previous to taking the iodine. In several instances an excellent opportunity was afforded for affirming this assertion.

A woman, thirty-six years old, was examined at the clinic in 1922, and a diagnosis of multiple non-toxic adenoma was confirmed by a metabolic rate of plus 4 per cent. The patient was advised either to leave the goiter alone or have it removed. Four months later I was called to see her and found her in an extremely toxic condition. She had lost 29 pounds, was too weak to walk, was trembling, and was extremely restless and nervous. The pulse rate was 140; the pulse pressure was increased, but the diastolic pressure was high. Her appetite was poor and had been for several months. No thrill, or bruit, or exophthalmos was present. There was marked quadriceps loss. On examination the metabolic rate was found to have increased to plus 44 per cent. The patient



Fig. 1—In this case iodine hyperthyroidism developed as a result of patent medicine.



Fig. 2—Same patient as in Fig. 1, after operation.

admitted having taken nine bottles of a patent goiter medicine; when this was analyzed by the propaganda department of the American Medical Association it was found to contain a high percentage of ferrous iodid. After two weeks' symptomatic treatment the woman improved enough to permit operation (Figs. 1 and 2). Another woman, forty-nine years old, was given iodine for four months to reduce an adenomatous goiter. Shortly before she came to the clinic, acute symptoms of hyperthyroidism had developed. These patients frequently exhibit a peculiar form of restlessness even bordering on delirium. There was a wild look in the eyes suggestive more of psychosis than of exophthalmos (Fig. 3). In spite of such sedatives as morphin, scopolamin, chloral and bromids, this patient was never quiet during the three days before her death. Her pulse rate was approximately 175 on admission and remained there despite the frequent hypodermic doses of digifolin. Finally, as a last resort I gave large doses of iodine as is done in case of exophthalmic goiter superimposed on adenomatous goiter, but this apparently only hastened the end. This convinced me, if there had been any pre-

vious doubt, that iodine hyperthyroidism is a distinct clinical entity, and that the best method of treatment is one of education and prevention.

Prophylaxis—In spite of repeated warnings to the medical profession of our state against the promiscuous use of iodine, I have observed as many as seven cases of iodine hyperthyroidism treated by a single physician. Although the attention of the health authorities has been called repeatedly to the large sale of so-called goiter remedies containing iodine, no effort has been made to check this, and these patent medicine concerns are still doing a thriving business. Many newspapers even today run in their columns these flagrant patent medicine advertisements including cures for goiter. One of our most prominent attorneys recently died a victim of such a "cure." There is still a reactionary element of the medical profession that is opposed to enlightening the people on questions pertaining to disease and particularly to its prevention, and it limits the scope of our efforts.

The fact that the incidence of iodine hyperthyroidism has apparently steadily decreased in our section of the country shows that our efforts have not been entirely in vain.



Fig. 3—Fatal case of iodine hyperthyroidism.

Iodin hyperthyroidism may occur frequently in children, exophthalmic goiter rarely, and toxic adenoma seldom, if ever. Toxic adenoma is gradual in its onset extending over a period of months and years. The average duration of onset is three years as contrasted with three months in iodine hyperthyroidism, but the acuteness and severity of symptoms observed in this disease are never seen in toxic adenoma. Two of the patients with iodine hyperthyroidism lost more than 50 pounds in two months. Toxic adenoma is characterized by secondary degenerative changes, hypertension, chronic myocarditis with auricular fibrillation, and chronic passive congestion. This is not true of iodine hyperthyroidism.

It is probably the generalized use of iodized salt in Michigan which suggested the subject of iodine hyperthyroidism for discussion. Wisconsin has not permitted the use of this method, preferring to administer to the school children each week a definite amount of iodine in tablet form, after the Swiss plan. It seems to me this is a more accurate way of administering iodine, although it is not as far-reaching. By the salt method some children undoubtedly receive a certain amount of iodine and others little or none. By the tablet plan one has at least a fair idea of how much iodine is received by each child. It has been said that there is considerable variance in the percentage of iodine contained in the different salts, although a standard is stipulated. Certain it is that there is little or no danger in giving iodized salt to children. The amount of iodine is probably insufficient to initiate hyperthyroidism even in the presence of adenoma. Whether or not this is true in adults remains to be determined. Although I have seen no true cases of iodine hyperthyroidism in adults that might be attributed to the use of iodized salt, I have seen persons in extremely run down condition that had been using it. Personally I can see no reason for administering any iodine to an adult for the prophylaxis of goiter since it is my opinion that all adenomatous goiters have their inception before the age of twenty-one. Pregnancy undoubtedly stimulates the thyroid and may be considered as an indication for iodine therapy, especially when the child is considered.

De Quervain¹¹ has said that the general prophylaxis by means of cooking salt, not to be harmful to goiter in adults, should be restricted to a minimum dose, even though it be insufficient for an infant al-

ready affected. The principal objection is the danger of hyperthyroidism or Graves' disease in the adult and also a harmful action on the other glands of the body. De Quervain¹² reported a series of 457 cases of iodine hyperthyroidism observed by Swiss physicians from 1922 to 1924. Iodized salt was a possible factor in eighteen of these.

In the report of the Swiss goiter commission at the International Congress last year it was suggested that in order to avoid the danger of iodine Basedow or iodine hyperthyroidism, promiscuous iodine treatment should be prevented. They recommended the giving of iodine in salt in an organically combined form and that the iodine dosage in the salt be reduced.

Other writers have called attention to the danger of using iodized salt. Kimball reported six cases and Hartsock sixteen. In your own state, Collier has warned against the use of iodine in adults with adenomatous goiter. I have seen no harm done to children from the use of iodized salt, but on the basis of my own experience with the use of iodine in several hundred children during the past six years, I question the good that may be accomplished. This problem cannot be solved at present, and I doubt if it can be for another decade or more. The use of iodine has not proved as satisfactory in my experience as has been claimed by many workers, and one wonders whether or not some other factor does not enter in, as for instance, infection. Certainly the great bulk of theoretical and practical evidence supports the theory of iodine deficiency, but I am not convinced that the clinical evidence is entirely in accord. I realize that the prophylaxis and the actual treatment of colloid or adolescent goiter appearing in children are two different questions. I believe I have proved to my own satisfaction that iodine alone in any amounts is not effective in the actual treatment of most goiters of this type, although some of the results appear to be excellent (Figs. 4 and 5). In the meantime, in the absence of a more effective means of treating the thousands of patients with early colloid goiter I am continuing to advocate iodine for the prevention of goiter. I seriously question whether the amount of iodine contained in salt will have any appreciable effect on this type which is so prevalent in the child of school age.

IODIN IN EXOPHTHALMIC GOITER

It is now generally recognized that iodine has proved a great boon not only to the



Fig. 4—Colloid goiter, before treatment with iodine.

patient, but to the surgeon in the successful treatment of exophthalmic goiter. We have been using it at the Jackson clinic since 1922 when Plummer first emphasized its importance. During the past four years only one ligation operation was performed, and this proved of no benefit. The stage operation has been abandoned because it is sometimes technically irksome, is a source of increased annoyance to the patient, and adds to the expense.

During this period of four years, more than 200 primary thyroidectomies have been performed at the clinic and in no case did death result from hyperthyroidism. In this respect it is important to note several points. First, the patient's confidence must be won. Then, it is important that the patient's condition should be as nearly ideal as is possible to attain. In the average early case in which the patient has not previously received iodine a period of preparation of from seven to ten days has been sufficient. In more advanced cases, or those in which there has been medication for a long time, a longer period may be required, but in no case have more than three weeks been required

in our experience. I have always advocated large doses of iodine and for several years have used 60 drops or more a day. Patients admitted in a crisis are given several times this amount. Moreover, it is important that the administration of iodine be maintained continuously during and following operation. The method used in the clinic is to introduce the iodine by means of a duodenal tube which is usually passed the day preceding the operation⁸. This plan has proved of more benefit in the handling of these patients than anything else that I have tried except Lugol's solution itself. The post-operative reaction, nausea, vomiting, and tachycardia have been almost eliminated.

While iodine has proved of great benefit to the surgeon as an aid to the surgical treatment of this form of hyperthyroidism, it is a double-edged weapon for the physician. The almost immediate brilliant response to iodine of patients with exophthalmic goiter is a temptation to continue its use not only for weeks, but for months. It has been pointed out that although a marked change occurs in the pathology of the gland and a reversion from hyperplasia to colloid occurs, this change is never complete. In my early investigation it was possible to find isolated areas



Fig. 5—Same patient as in Fig. 4, after two years' treatment.

of hyperplasia in patients that had been on iodine for six months or longer⁷. Moreover, it was shown that the low-grade hyperthyroidism which persists causes myocardial degeneration. It is these cases that increase the surgeon's problems today. While some of these patients fail to respond to ordinary doses of iodine, they may be brought into condition for operation by greatly increasing for a week or two the usual dosage.

IODINE IN TOXIC ADENOMA

The use of iodine in toxic adenoma is still a debatable question. I was practically convinced that iodine was not beneficial in the majority of cases of this type, when I was surprised a few months ago to read a report from your state medical school that brilliant success had been attained with this method. While I believe this view is not in accord with that of most workers, I am at present not prepared to present sufficient data on this type of case. Of course, these workers reaffirm the view of the Crile-Graham school that toxic adenoma and exophthalmic goiter are synonymous. It should be recalled that adenoma is frequently associated with exophthalmic goiter and when the latter is superimposed on an old adenomatous goiter the beneficial effects of iodine should be attributed to the action on the exophthalmic goiter rather than the adenoma.

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IS PRENATAL CARE WORTH WHILE?

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Not so very long ago it was the rule rather than the exception for the expectant mother to visit her physician once, usually in the latter months of pregnancy, at which time the date of confinement would be estimated, the doctor's fee arranged; and then the physician would see no more of his patient until labor pains began. More recently people are beginning to demand prenatal care, and expectant mothers are visiting the doctor as soon as they believe themselves to be pregnant, and to continue their visits at regular intervals, until the baby has been born, and the metamorphosis or involution of the genital organs has taken place. A discussion of whether or not all this is worth while is the purpose of this paper.

OF WHAT DOES PRENATAL CARE CONSIST?

First of all, and perhaps most important, a careful history should be taken. This should include the patient's name, the date she presents herself for examination, her age, nationality, parity, and the date of her marriage. Usually the family history is relatively unimportant, but the patient should be questioned as to carcinoma or tuberculosis in the family. In her past personal history—rickets, scarlet fever, diphtheria, rheumatism, syphilis, gonorrhoea, pelvic disease, heart, lungs, kidneys and previous operations are especially important.

If a multipara, her previous obstetrical history should be obtained—was there vomiting, headaches, oedema, hemorrhage, eclampsia, or infection during her previous pregnancy? The number of children—were they full term or instrumental?—their weight and present age. Also have there been any miscarriages?

Next the menstrual history—time of first appearance, type, duration, pain, and date of the last period. From this the estimated date of confinement may be determined. As good a method as any is the customary method of counting back three months, and adding seven days.

At each visit the patient should be questioned as to vomiting, headaches, oedema, visual disturbances, regularity of bowels, and hemorrhage.

In private practice it is perhaps impossible to take a blood Wassermann on every

patient, but by careful, leading questions it is often possible to obtain information which would make one suspicious of syphilis. In all these cases Wassermann examination should be made. The importance of this will be referred to later.

PHYSICAL EXAMINATION

After the history a complete physical examination should be made, and in order to do this properly it is necessary that the patient remove all her clothing. This complete physical examination should be repeated just before confinement as very frequently changes have occurred since the original examination.

Also at this time a careful pelvic examination should be made, first of all to establish the diagnosis of pregnancy, and secondly to determine the presence or absence of abnormalities.

Pelvimetry should be an important part of this examination. The usual measurements which are taken include—inter-spinal, intercrystal, intertrochanteric, external conjugate, diagonal conjugate, and bisischial diameters. All of these measurements are important to determine the type of the pelvis, and are also very interesting from an academic point of view. There are two diameters, however, more important than all the rest, and absolutely imperative if we are to do conscientious obstetrics. I refer to the diagonal conjugate, from which the true conjugate may be estimated, and to the bisischial diameters. A knowledge of these two diameters will detect the two most frequent types of contracted pelvis, which are the flat and funnel types. So much for the history and physical examination.

At this time the patient should be instructed in the "Hygiene of Pregnancy." This should include instruction as to the diet, cathartics, kidneys, exercise, coitus, bathing, dress, corset, and care of the teeth.

BLOOD PRESSURE READINGS AND URINE EXAMINATIONS

These two laboratory aids are so important that they deserve special mention. The blood pressure should be taken and the urine examined at every visit. In this way practically all of the toxemias will be detected early, and measures may be instituted for their control.

As soon as the foetus has become large enough, usually about the sixth month, the presentation, position, and posture of the child may be determined. In this way many abnormalities may be detected, such

as breech, and transverse positions, and in a great many cases they may be corrected. Patients with lax abdominal walls and a marked obliquity of the uterus are instructed to lie on the side opposite the obliquity and this will perhaps lessen the number of abnormal presentations.

AVOID HYPEREMESIS

During the first trimester the most frequent complications encountered are: nausea and vomiting, which, if allowed to go on, may reach the stage of hyperemesis. Usually by instructing the patient to eat a diet high in carbohydrate value, and by increasing the methods of elimination this distressing factor may be controlled.

Second, hyperacidity, heart-burn or sour stomach. The administration of alkalies is usually sufficient to control this symptom. There is a new preparation, Alucol, an aluminum colloid, which is supposed to take in combination the excessive hydrochloric acid and release it slowly. I have used this in a few cases with good results.

During the first trimester is the most frequent period of abortion, up to the time of the complete attachment of the placenta. To minimize the occurrence of abortions—misplacements should be corrected, violent exercise avoided, coitus restricted, and most important of all, at the first sign of any blood the patient should go immediately to bed and stay there. I frequently give my patients a tablet of a quarter of a grain of morphia to be taken by mouth, at the first sign of blood, or the institution of any uterine cramps.

IF SYPHILIS BE SUSPECTED

Syphilis—as mentioned before, all suspicious patients should have a Wassermann taken, and if found to be positive, it should be repeated to allow for laboratory error and the possibility of mixed specimens. If positive on two occasions, intensive treatment should be immediately instituted. In this way many babies will go to term that would otherwise be born prematurely, and many babies will be born with no evidence of syphilis which otherwise would almost surely have been syphilitic.

It is in the latter part of the second trimester that the evidence of toxemia, as discovered by the blood pressure and urinalysis is usually detected. As a result of restricted diet and increased measures of elimination, few, if any of these should go on to convulsions or serious consequences.

CARDIAC DISEASE

With the enlargement of the uterus and resultant increased abdominal pressure the signs of cardiac disease usually begin to appear, if present. It would take too long to discuss the treatment of this condition, but it has been discussed in another paper printed in this Journal for April, 1928.

In the third trimester increased vigilance should be observed for toxemias and cardiac disease. At this time the patient should be instructed in the care of her breasts, the relief of pressure symptoms by a properly fitted corset; premature labor should be prevented, and abnormal positions should be recognized and corrected, if possible.

As was stated in the beginning, it is the purpose of this paper to discuss whether or not all this is worth while. An analysis of 1,000 consecutive cases studied in the Out Patient Obstetrical Clinic of the Long Island College Hospital shows the following:

1. 106 cases of contracted pelvis—	
Generally contracted	36
Flat	27
Funnel	43
2. Complications—	
Mitral Stenosis	4
Mitral Regurgitation	3
Syphilis	30
Toxemia	37
Placenta Praevia	2
Premature separation of the Placenta	2
Twins	4
Large Fibroids of the Uterus	3
3. Abnormal Presentations—	
Breech	27
Face and Brow	6
Transverse	4
Prolapsed Cord	2
Complex	1
4. Operative Cases—	
Forceps	22
Version	5
Introduction of Bag	4
Conversion of face to vertex	2
Perforation of after coming head	1
Caesarian Section	8
5. Maternal Morbidity and Mortality—	
Morbidity—	
Mastitis	7
Febrile Puerperium	59
Pneumonia	1
Mortality—	
Pneumonia	1
Puerperal Infection	3

INFANT MORTALITY

	Number	Per Cent
Stillbirths	19	1.9
Breech—large head	3	
Placenta praevia	1	
Accidental hemorrhage	2	
Toxemia	4	
Syphilis	1	
Full term—macerated	3	
Full term—not macerated	1	
Second twin macerated, first living	2	
Version—cord complication	1	
Full term—cord around neck	1	
Deaths of infants under 14 days.....	6	0.6
Acrania, died three hours	1	
Premature, died four days	1	
Full term, died one day (syphilis)	1	
Full term, died four days	2	
Umbilical hemorrhage	1	
Total	25	2.5

Was this worth while? I believe that the low maternal and foetal mortality—the low morbidity rate, the infrequent necessity for operative interference, and most of all, the satisfaction received from a job well done, make it the duty and privilege of everyone who practices obstetrics to do conscientious and careful prenatal work.

EARLY TREATMENT OF THE INSANE

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LAPEER, MICHIGAN

Without any special reading on the subject of insanity in ancient times, I was of the opinion that since the time when the slightest standard of behavior came into existence, there must have been departures from this, and ever since there has been a striving for betterment of social position, or physical conditions, there must have been a stress of living, and some must have endured, as a result of these strivings, a mental strain greater than they could bear without mental injury. If this striving for physical betterment or social position brought about war, defeat, destruction or loss of property, friends, and families, which it did, then there must have been those who failed to adjust their loss. As long ago as when man first loved—and this surely takes us into antiquity—he must have been frenzied by defeat in love or loss of the object of his love. All these situations make for loss of mental balance.

MAN'S AMBITIONS

It was early in the history of the race that the following characteristics of man developed: desire for leadership, desire for security, acquisitiveness, and to procreate. If these characteristics were as disastrous to mental balance then as they sometimes are in the present day, then before written history, insanity existed as we have it today. The effort to attain leadership or dominance over another person or people, entails a lot of stress, whether it is successful or not, and much more upon those, who in ancient times were dispoiled of home, family, or property. One might accept the above with the reservations that the mind not being so highly developed, would be less sensitive, and thus, less disturbed over defeat in those primitive urges of our being; or, that as the population of the world was less in ancient days, there would be less

stress and less insanity than now. I do not think that one could satisfactorily sustain such reservations. The answer to the first would be that even the lower forms of life are sensitive to interference with their environment even to self-destruction. In answering the second, you would have to consider the reason for the movement of large bodies of inhabitants of the earth before the days of written history. Was it not the stress of living conditions, more people and larger flocks than could be maintained in the homeland, and the consequent seeking out of more favorable environment? A glimpse of the difficulties of this search for pastures, is shown in the film and book appearing under the title "Grass". A pastoral people still with primitive habits of living, moving to green pastures under conditions that seem almost insuperable. The whole picture presents the appearance of an urge that is fundamental, such as that of self and race preservation. If the explanation given for the movements be true, then we can go a little further, and say that at all times, the relation between the number of people and the known world was about the same, and the position of those who had to hustle for their existence in ancient times was the same as now. They did not have as much then as now, for there was not as much to have. It is a truism, that any satisfying of needs only increases them. The relationship between the need and the satisfying of this need, on whatever plane we consider them, has been the same throughout the history of mankind, and in this relationship of desire and satisfaction comes a great part of the stress or conflict that results in mental break.

THE FIRST PHYSICIAN 4000 B. C.

The first physician of record in history is Elm Hetep. He lived in the third dynasty of Egypt before 4000 B. C., and became the medical divinity of the Egyptians much the same as Aesculapius did to the Greeks. One of his titles was Master of Secrets, and another, Bringer of Peace. After his death, he was represented as one to be venerated, and one of the pyramids was erected to his memory. He is represented in hieroglyphics as one who, if he could not cure, could console and inspire with courage, thus making incurable diseases more bearable. This is the first record of a man who, while he was a general physician, used his knowledge to relieve the mental state dependent upon an incurable disease. Might we not call him the

first psychiatrist? Master of Secrets and Bringer of Peace is a fair ideal for a psychiatrist. If we may not name him a psychiatrist, then he was the forerunner of the type of physician who feels that to name the incurable disease and leave the patient in mental misery, is not the end of his work.

At this time, all knowledge of medicine being in the hands of the priest, many of the sick who could do so, came to the temples to be treated; and there is no question but that the priests were the psychiatrists—they were the sanitarium physicians of that day. It is interesting to note, that in that early day, sleep and dreams played a prominent part in diagnosis and therapy. Some writers, commenting on this fact, suggest that the sleep was not a natural one, which might come to the sick through their at last being in a place where their cure was sure, but that the sleep and dreams are strangely suggestive of hypnosis. One historian, speaking of the occurrence of this same thing in the Greek temples, suggests that the sleep was induced by the use of some gas known only to the priests. Whether these commentators are right or not, it remains a part of history that sleep and dreams were recognized as of importance in the care of the mentally sick. The Egyptians had some conception of dual or split personality, not with the hair-splitting refinement of today, but still strongly suggestive of what is taught today. They recognized the necessity of breaking the chain of gloomy thoughts of the melancholic.

APPEALING TO THE SENSES

Pinel writes of the temples of the Egyptians as being very beautiful places. Pinel does not give the authority for his description, but we would not accuse him of giving such a description without some authority for his statements. I am quoting from his description, "engaging their interest by powerful and continuous impressions upon their external senses." "Efforts of industry and of art, scenes of magnificence and grandeur, the varied pleasure of the senses and the imposing influences of a pompous and mysterious superstition." Beautiful paintings and images were everywhere exposed to view. Games and recreations of all kinds were used. Continuing the quotation, we have, "here enchanting songs and most melodious sounds took prisoner the captive senses." "Flower gardens and groves disposed with taste and art, invited them to refreshment

and salubrious exercise." Gaily decorated boats sometime "transported them to breathe, amidst rural concerts, the pure breezes of the Nile." Sometimes they were conveyed to its verdant isles where, under the symbol of some guardian deity, new and ingenuously contrived entertainments were prepared for their reception. Every moment was devoted to a system of diversified amusement, enhanced and sanctioned by superstition. An appropriate and scrupulously observed regimen was prescribed. Quoting again, "repeated excursions to holy places, preconceived têtes at different stages to excite and keep up their interest on the road, were in no small degree calculated to suspend the influence of pain, calm the inquietudes of a morbid mind, and to operate salutary changes in the various functions of the body." If these descriptions are true, what more could be desired for a setting for the care and cure of the mentally disabled? After thousands of years, nowhere in the world has such a reality been surpassed, or attained, or even conceived of, by the wildest idealism of any worker in this field. From this intriguing description of the Egyptian method of treating their insane, we must not conclude that force, restraint and torment were not present in ancient times. Nothing could be further from the truth than to suppose that such an idealism existed without its antithesis, chains and brutality. Chaining, beating and tormenting the patients to cause the evil spirits to depart, was common practice.

SAUL SEIZED WITH MADNESS

Among the earliest, perhaps the earliest definite case history of insanity, was that of Saul, king of Israel, who was seized with madness, probably a maniac depressive case, or one of parania with maniacal outbreaks accompanied by homicidal tendencies. A notable feature in this case history, is the employment of music in the treatment of Saul's mental affliction. This was a very definite employment, for it says that David was an accomplished player, and the one, suggesting David being brought to Saul, states it was done because of the possible influence of music upon his madness. It is recorded that its first effect was beneficial, but afterwards, not so. This would indicate that at 2000 B. C., the recognition and treatment of insanity was not a new thing among the Israelites. Saul, who had been a sheep herder in his boyhood, was made the first king of Israel by Samuel. The Israelites

were not used to a king, nor had Saul any precedent for his guidance. This made his task difficult. He was a successful warrior and usually defeated his enemies in battles. One day the Phillistines appeared in battle array. Among their numbers was a giant, who went every day into no-man's land and challenged the best of Saul's army to combat. No one dared to accept his challenge, and the Israelites, including Saul, acquired what would be known today as an inferiority complex. They could not harmonize their faith in the God of Israel with their fear of Goliath. Failure to rationalize is a step toward insanity. David, a young sheep herder, with his sling and stone solved the difficulty by killing Goliath, and in their joy of being relieved of the difficult situation, they acclaimed David a hero. They shouted in song, "Saul has killed his thousand, but David his ten thousand." Now this did not please Saul, so he withdrew to his tent to brood over his discomfitures. The song became very popular, and Saul heard it on every hand, which increased his hatred, and he planned the death of David. Love of the people for David made this a difficult undertaking.

SAUL SULKS IN HIS TENT

In the meantime, his son, Jonathan, became a fast friend of David, and David became Saul's son-in-law, which again complicated the situation. The fact that he was popular and his son-in-law, made Saul fear that the people would make David king. There was no ground for this fear, but it added to Saul's mental disturbance, and his periods of withdrawal from his people and isolating himself in his tent came more often. Every move David made was interpreted as antagonistic to Saul and his house. His behavior in the tent and in the presence of his people, and his attitude towards David and other of his friends, became a scandal in Israel and his people declared him mad. The prophet Samuel contributed to his mental condition by telling him the Lord had withdrawn his favor. In all this turmoil he lost his ability as a warrior, and in one of the battles with the Phillistines he was sorely wounded, and seeing the battle going against him, he committed suicide. I have gone into this case history at some length, for I am quite sure that, although three million copies of it are published every year, not many of you have read it since you began the study of medicine.

AN ANCIENT AGROMANIAC

Another case that comes to my mind from my boyhood reading, is that of Nebuchadnezzar, king of Babylon, who appears to have been an agromaniac. He said that he was king of all nations and races, and all languages that dwell in the earth. This would suggest to us that he had delusions of grandeur. He was given to visions and dreams. He is quoted as saying repeatedly, "The thoughts upon my bed and the visions of my head trouble me." He had one dream that disturbed him more than the rest, and he called the wise men of the Chaldeans to interpret this dream, but they were unable to do so. Finally he called Daniel (the ancient Freud), and told him the dream which had been troubling him so much, and it is reported that Daniel was astonished for the period of an hour. (That was very clever of Daniel, for if you will read this case history, and I refer you to the original text for it, you will see that the interpretation was very simple and that Daniel needed that hour to gain courage to tell Nebuchadnezzar). Daniel's interpretation of the dream was, that it was a message from the Most High, and that the Most High was saying that Nebuchadnezzar should be driven away from man and that he should dwell with the beasts of the field. And it came to pass that Nebuchadnezzar was driven out and spent seven years in the fields, "eating grass as oxen and his body was wet with the dew from heaven till his hairs were grown like eagle's feathers and his nails like bird's claws." This is a pretty fair description of the actions and appearance of an insane man. It is reported that Nebuchadnezzar recovered his sanity after ten years.

In sacred history many cases of insanity are recorded, and where they are written up as the cases of Saul and Nebuchadnezzar, they are good reading from the psychiatric point of view. In fact, I think the Bible could be recognized as a good text book for those interested in the cause and prevention of insanity or for those who are interested in mental hygiene.

THE CONTRIBUTION OF THE GREEKS

The Greeks, Assyrians and the Romans made use of their temples dedicated to gods of medicine in the same way as the Egyptians and derived much of their treatment from the same source. Some of these later temples were built on a magnificent scale. The one dedicated to Aesculapius contained baths, places for exer-

cise, music and mystic rites, and have their counterpart in the present day sanitariums; but nowhere do we find them described in such glowing terms, as used by Pinel in his description of the earlier Egyptian temple. We could spend a whole evening studying the cases that appear in Grecian poetry. Homer writes of insanity as if he were familiar with the different manifestations, as when Ajax, smarting and brooding over Ulysses being awarded the arms of the dead Achilles, killed his own cattle, thinking they were the sons of Ulysses, and had no remembrance of the fact, when he saw them lying dead before his tent in the morning. The history of the Romans and of the Greeks and their mythologies are full of suicides while insane, and of insanity caused from defeat in love and war, and of the insanity caused by the angry gods, Bacchus in particular. In fact, at this time it appears that insanity was not uncommon, and also that the causes were very similar to those which operate today. Albamas, king of Thebes, pretended his wife was insane, in order that he might marry Ino. He became insane—his delusion being that Ino was a lion. Ino, herself, was really insane and destroyed her own children. There is a mix-up in family affairs that would furnish some headliners had it happened today.

In Cambyses, king of Persia, we have a fair description of dementia praecox, or epilepsy, ending in death; and in that of Cleomenes, king of Sparta, one of alcoholic mania. The Spartans attributed Cleomenes' downfall to bad company. A group of Scythian merchants visited his capital and taught him to mix his drinks, and from this cause he became mad. The quality of his liquor must have been bad, but it is recorded that he committed suicide rather than go without it.

HIPPOCRATES RECOGNIZED MENTAL DISEASE

Hippocrates well understood the part that the stress of living has upon the mind. He distinguished between melancholia, mania, and senile dementia. In his books he did not write at any great length on mental disease, but what he said was good. There is much more in the works ascribed to him, that is not authentic. He recommended that the melancholic should lead a tranquil, quiet life. The absence of all excesses, sobriety, a vegetable diet, food but little seasoned, continence, exercise short of fatigue, and no sunlight was the treatment he prescribed. When it

comes to the part medicine might play in the relief of patients, the treatment has not the same appeal to modern judgment. He prescribed helebore and bleeding.

In summing up psychiatry among the ancients, the cause of insanity was often the anger of their gods. In modern thought and expression, this would be stated as their inability to rationalize their behavior, or their inability to suffer the consequence of violation of established customs and rules of conduct, which so often in their day had the authority of "thus saith the Lord" or its equivalent. Among other causes might be added the stress of living, and the failure to acquire that which they greatly desired. The treatment, since earliest history, had in it methods which have a strong appeal to us today, as well as that which we read only to condemn. This is probably shown best by the writings of Celsus and Caelius Aurelianus. Celsus was born in 30 B. C. From the title of his work on the insane, "*De Tribus Insanie Generibus*", we might fairly conclude that he thought himself broadly informed. He says of the insane, that discoursing as if sane, is an evidence of insanity; and also, that those who ramble in their discourse have a form of insanity; but that they, along with those who attempt trifling injury with their hands, do not need rough measures. (This was comforting to the essayist). Those who are more violent must have their audacity coerced by blows. Excessive mirth must be checked by scolding. Torment may be resorted to such as hunger, pain or flogging; and by such treatment, through fear, the patient will do as they are asked. Sudden startling, such as informing them of lost wealth, was good treatment. He advises care about accepting their offer of submission, because they may be deceiving you.

KNOWLEDGE GROWS MORE ACCURATE

In Celsus Aurelianus we get a picture, supplementary and considerably different from that of Celsus. It is not known just when he lived, but somewhere in the first century, along toward the end. One historian suggests that he was a contemporary of Galen, basing his opinion upon the fact that Galen does not mention him. His discourse on the care of the insane is the most complete that I have read. He regards a room on the ground floor, moderately light and warm, as being absolutely necessary. The windows should be so placed that the patient could not hurt him-

self by jumping from them. A comfortable bed should be in the room and if the patient is in danger of hurting himself, he advised padding the patient with soft wool instead of padding the walls. The attendants should be in sufficient number to prevent escape, and should have the judgment not to confirm a delusion by agreeing too readily with the patient, or to exasperate him by disagreeing. In no case does he permit chaining. Should the patient's eyes be affected by light, they should be shaded, but not in a manner to deprive the rest of the body of sunlight. In regard to diet, he did not carry his feeding any further than just enough to induce hunger—the food to be light and digestible. He suggests that there be alternate days of fasting and feeding, and advised cupping of the head and shoulders. Sleeplessness he relieved by carrying the patient about on a litter or chair, or by the sound of running water. He was mildly a hydrotherapist. He prescribed riding and walking as the patient improved. The patient was to read compositions containing inaccuracies in order to develop attention and concentration (a form of the present day Terman test). The compositions were to be within the understanding of the patient and not too difficult. Theatrical entertainments were provided for the melancholy, and solemn scenes for the hilarious. Conversation was always to be conducted in a low tone of voice, and of an encouraging or amusing nature. In these conversations the attendant would have regard for the previous occupation of the patient, with the hope of renewing interest in life. Any mental exercise was to be followed by rubbing with oil and a short slow walk. Shampooing and friction of the head was considered quite important. Wine was forbidden until after health was restored. If the patient had sufficiently recovered, he was permitted to attend the disputations of the philosophers, in the hope that he would be persuaded, through an interest, to forget his grief, fear, or anger. Finally, the cure of the patient was to be established by traveling and sea voyages. He condemns confining in a dark room, too much seclusion, and the omission of ordinary occupations; and he denounces extreme abstinences, saying that if those who prescribed them practised them, they would find that the effect of hunger upon themselves would be to induce rage. He does not hesitate to assert that starving will induce madness, rather than cure it. Bucknell, in writing of Caelius' attitude

toward chains and whipping, states that his observations are of special interest to us at this time. He condemned their use and observes that a more proper procedure would be to employ more attendants. He adds that stripes and flagellations only induce sores. The returning consciousness of the patient should not be hurt by the sense of his wounds. In his writings he reviews the teachings of others, and condemns the extensive use of hydropathic measures, bleeding to extreme, or the use of clysters, of alcohol, of music without sufficient discrimination, and apparently anything that disturbs the emotions. He certainly had a humane attitude towards the insane that we have but recently re-attained.

In the writings of Celsus and Celius, you will discover a rationalism that seems to be born of their own experience and in keeping with their philosophy. Celsus, rather hard-boiled, clung to traditional methods. He had a little of the attitude that the insane are something apart from the sane. The other man was kindly, humane, and not less, but more scientific.

Galen offers very little that is of interest to us. He regarded insanity as the opposite of wisdom. He thought that certain foods, such as meat from different animals, would produce insanity. Some he bled, and others he did not.

Before leaving the consideration of the ancient methods and entering upon that of the medieval period, it is well to consider exorcism. It was a means devised by man to neutralize the effect of their belief in the power of their gods to visit insanity upon them. It has effected ancient, mediaeval, and modern treatment of the insane. Ever since man first postulated a wrathful god as a source of the phenomena of nature that he could not understand, and with which he could not cope, he has tried to influence his gods by peace offerings and rites of submission and abasement. If today we believed that the insane were possessed of the devil, we would believe in exorcism as a very rational procedure; but we do not so believe, and as physicians are quick to condemn this rite because of its lack of truth; yet the world is not entirely rid of exorcism. Many people still hold to it in a mild degree and practice the rite. In fairness it can be said, that a strong belief in that which has not even a semblance of truth in it, can be made to, and does operate, for the good of the one who believes. C. McFie Campbell recently wrote a little

book, "Belief and Delusions", in which he brings out the point, that much of our misery is dependent upon beliefs and delusions. As an example of this, he gives the story of a Japanese mother whose child died and for whom she grieved greatly. The priests of her religion have a rite that they believe will bring the dead back. The mother consulted the priest, and when he heard the story of her affliction, he proceeded to invoke the power that would accomplish what the mother wished. In the presence of the mother, he talked with the child in a low voice, which in all probability the mother in her excitement accepted as the voice of her child. The child told the mother through the priest that she must not weep, because the river, which the dead must pass over, was so swollen by mothers' tears that it could not be crossed. The spirit of the child had to wander in space until the mother could dry her tears. We can easily believe that the mother ceased her weeping, and in her new interest was relieved of her great sorrow, as the story states. Here is an example of believing in something that we could not accept as true; in fact, it is wholly based upon error and superstition; yet it operated for the good of the one who possessed it. So may it not have been, that these people we have been considering, believing that their mental derangements were visitation of their gods, or a possession by evil spirits, very naturally and with good judgment developed the practice of exorcism; and in the treatment of the milder psychopathies, they received a benefit from it. In our judging of these matters it is hard for us to divest ourselves of an attitude which is the result of the comparatively recent tremendous increase of our knowledge of natural phenomena.

THE CASTING OUT OF DEVILS

In this connection let us, too, consider the position of the Christian church. The early Christians embodied in their knowledge the value of exorcism. All the world believed in it, and nothing in the history of the church, or the teaching of its founders, would lead one to think that they opposed it. In fact, the church was in distinctly the opposite position. Christ cast out devils, and there still exists in the church in a mild way, the exorcism of the evil spirits; but that the church was responsible for the establishment or development of this rite, is of course not so. Two thousand years before the founding of the church, Solomon was an expert

exorcist. What would be more natural than that the early Christians, believing it themselves, and going out among people who were firmly grounded in a similar belief, would try their hand at exorcism. Their faith in their Master being young and strong and always ready for a combat with the evil one, it, no doubt, carried them to extremes; but no more so than the religion and philosophy of the ancients.

We have to look farther than demonology and the rite of exorcism for the whole cause of the falling away in the interest in the insane during the dark period of the history of Europe. With the fall of the Roman empire, it seemed as if the very props had gone out from under society, and there was great confusion everywhere. History has recently repeated itself in this particular. Interest in other things than the understanding of the insane was lost and it took a great many years, centuries, for man to recover this interest, even to the measure of that possessed by the Romans.

INSANE IN THE MIDDLE AGES

In the medieval period, the mildly insane roamed the country and existed as best they could. It is likely that most of the witches, hermits and holy men belonged to this class. The insane of the wealthy families were cared for in their homes. The monks began to take the insane into the monasteries to care for them. This service, no doubt, beginning with high purpose, degenerated to the point where they were forbidden to receive them. To England belongs, as far as we know, the credit of setting apart the first public building for the housing and care of the insane in Europe—Bethlem, or Bedlam, as it became known. This place became an abomination to the English people and, when one reads of the treatment of the insane as practised there, you are convinced that psychiatry, or the care and prevention of the insane in medieval time, had dropped to an extremely low level. In fact, during the entire history of the medieval period and up to Pinel's work, there is not much to contemplate with any pleasure. While we get this impression, we know that nothing is utterly bad, or that evil exists alone; and as a matter of fact, all through this period there were many who were kindly disposed toward the insane, but they found themselves helpless to change the general conditions. There were individuals in England and France who preached the gospel of kind-

ness, but for a long time they were much like the "voice of one crying in the wilderness". Quakers in both England and America were the first organized body to recognize the situation, and to apply themselves to correcting it. The French government, in response to agitation, and with serious misgivings, granted Pinel the authority to remove the chains. The effect of this upon the insane so supported Pinel's contentions and awakened interest, that from that time on all the world slowly changed their attitude toward the problem.

EARLY FUNDAMENTALIST THERAPY

I have not spoken of the part that America has played in the latter part of the period just ended; but, lest we be too severe in our criticism of Europe, it is well to remember that we were in this picture, and that we did not lend any beauty to it. As I read history, we are guilty of all the excesses chargeable to others, and we did not change because of our good judgment. It reads as if we were persuaded against our judgment by the strenuous efforts of a few ardent workers who, in season and out of season, preached a more humane treatment of the insane than obtained in America. As we read the theology of our early fathers, as expounded by their outstanding divines, who were also their leaders in other life interests, we will discover about as dour a philosophy of life as could be conceived of. Their religion was based upon the repression of normal emotions—they constantly presented to the people the utter worthlessness of man and of human effort, and held up to their mental vision the spectacle of sizzling in hell fire if they did not conform to their teachings. All that we know about the beliefs and worship of the pagan gods of Egypt, Greece, or Rome, is no worse, and in fact much pleasanter to contemplate than the beliefs of our early fathers. I bring this up, not to open a discussion of religions, but only because it is related to the subject under discussion. Some of the preachings of Jonathan Edwards are the ravings of an insane man. Cotton Mather, who was a preacher of the gospel of that day, says, "in New England where splenetic maladies are prevailing and pernicious, pious people have developed melancholy indispositions. These are the unsearchable judgments of God." There is no need to blame either New England or God after reading the gentleman's own contribution to the cause of melancholia. This preaching and this attitude toward life surely in-

fluenced the treatment of the insane—the treatment naturally being more ecclesiastical than medical. If exorcism through prayer failed, prison, chains and stocks were tried. Public opinion permitted and urged the civil authorities to burn at the stake those who without doubt were either feeble-minded or insane.

THE WORK OF RUSH

In 1751 Pennsylvania built its first hospital and some insane were received there. Here we should be able to find the most enlightened care of that period, but it is recorded that those who made any trouble were chained in rooms in the basement of the hospital. Calomel and bleeding was the medical treatment. Benjamin Rush, an attending physician and one of the greatest of our early clinicians, made his study in this hospital that resulted in his book, "The Mind". He had no better remedies to offer. He was broadly informed, had a kindly disposition, and had studied in Europe. He was interested in the care and treatment of the insane, and had made original observations that marked him as an outstanding man in the medical world; yet, he suggested punishment with fists and even with a whip. In fairness to him, let us say that he mentions these only as a last resort and then to be used in moderation. As I read this, my impression was that he could not break entirely with traditional methods. He did not approve or he did not frankly condemn.

Hospitals for the insane began to appear with very little general improvement in the care of the patients. It depended on the personality of the man in control as to how humanely the patients were treated. There was no public opinion to insist upon better treatment. As to medical treatment, they received what was in general use at any given time, just as Rush used calomel and bleeding.

One has only to consider the conditions that give rise to such movements as Christian Science, Osteopathy, or better still, the salutary effect of Homeopathy, to have a just appreciation of how frozen we can become. Who knows but that we would still be using heroic doses and bleeding for almost everything, had it not been for the influence of these movements—not on us, but on public opinion. I, personally, do not think that our present interest in mental diseases, or in the use of physical therapy, would have been so great, nor would the present high standing of psychiatry have been attained as quickly, had

it not been for the push that these step-children of medicine have given us. W. A. White says that modern psychiatry began twenty years ago. This date corresponds with the date of some of these pushes to which I refer. I am not going to go into detail in regard to the advances in psychiatry during the later years. That belongs to another subject. Suffice to say, psychiatry is today attaining a high standard and our mentally diseased patients are cared for humanely throughout the whole United States and the modern thought of the world is being brought to bear upon the problem of the prevention, care and treatment of mental diseases. For those who cannot remain in the community, the government supplies hospitals equal to those of any other place.

In conclusion, I believe that:

1. Insanity is as old as the race, and existed long before written history.

2. In the Greek and Roman civilizations, the treatment of insanity was in accord with the general knowledge of the times and in the main was humane. The Roman code was the first legal recognition of their rights as citizens.

3. The fall of the Roman empire was in a large part responsible for the condition of the insane during the medieval period. This was to be expected, for it was through its widespread activities that current information was spread, and education carried to remote places.

4. The belief that gods, devils and evil spirits were causes of insanity, has run through all history and has influenced the treatment, in the main, for the bad.

5. Greater advance has been made in the last twenty-five years in understanding the underlying causes of insanity than in all time since the world began.

6. Psychiatry has broadened its field of influence and usefulness, so that in almost all of the activities of man its guidance is sought. It is finding itself and its place.

INSULTS IN SURGERY

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A scene in the operating room of Bellevue Hospital in 1876. Three men in the nude; two on chairs, one on the operating table. Instruments spread around on the

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shelf by the lower tier of students for them to handle. Patient on the table held down by four strong men. Without anesthesia, the operator plunges a knife into the hip joint. Patient howls and squirms, filling the amphitheatre with his groans. The waiting patients faint, fall off the chairs onto the floor. Men go to them, grab them by the heels, jump on the chairs, invert them, bring them to, put them back and the operation proceeds. The two waiting men naturally in a state of fright, knowing what was soon to happen to them.

Ten years later, a patient placed on the operating table. Four strong men put alongside. An anesthetic, the most incompetent man who could be found, ourself, given a cone in which had been placed some lint saturated with ether. We were expected to push this over the face, hold it down by grabbing the ears, and have the patient under in two minutes. Sometimes the adrenals would be so stimulated that the man would break away and then we would have the run of our life.

In the present day, the abdomen is the most commonly attacked by surgery. A sufficient incision is made because the operator must not be discommoded. He must have a comfortable approach, must have a wide open exposure to be enabled to see things. There is complete relaxation under ether, yet retractors are introduced. They do not want to stay in place and keep shifting and rubbing the peritoneum. The surgeon enters with his hands and instruments, makes a little cut, followed by the assistant with a gauze mop, and then for half an hour or more it is a game of "me first, you next" between the surgeon and the assistant, punching away at a viscera that has never known anything but gentleness. The operation over, the hand and arm are passed all through the abdomen, because some one once said that the spleen should always be investigated as there might be something the matter with it. Much of surgery is as automatic as the etiquette of Louis XIV.

It is quite likely that if the tissues and the cells of the body could voice their sentiments they would call this procedure brutal and the surgeon a brute, but man is essentially such and in the recapitulation of things, looking back, we see the child pulling off the grasshopper's legs and watching him crawl; the farm lad putting a chicken on the stove and seeing it dance; the boy in the city tying a can to the dog's tail and watching him run.

The barbaric instincts are not very

deeply buried by the culture as may have come to us. Early pre-anesthetic surgery demanded rapidity. A patient under ether seems to be unconscious, but the upper centres only are numbed. The remainder are not and the true physiological mind is awake and greatly disturbed. The brain is but the organ of expression for the body and if not allowed to express itself externally, joins the other viscera mightily for self-protection.

There has been a fight for life from the earliest ages and physiologically we are full of fight today. Each organ and each cell will retaliate for its existence. In this least protected part, the abdomen, the reaction is great and most varied. Cattle-horns or surgeon, it is all the same. To the viscera and to each cell of the economy surgery is an insult and the surgeon cruel.

Ether was discovered in 1819, but was slow to be appreciated. The oldtime doctor did not want to change his methods. Another reason was that for a number of years, the chemist was unable to give out the pure article. Even in the '90's it not infrequently happened that within twelve hours the patient would die of acute suffocative edema, bloody froth exuding from the nose and mouth.

Early surgery was occupied with the cutting down of mortality, for when it began, (which, comparatively speaking, was only some thirty years ago), the death-rate was alarming. Rude and crude we were, entering upon an unknown land, well befogged with ignorance and superstition. As we progressed, improved and eliminated the non-essentials and trained ourselves to better work through broader, deeper knowledge of the fundamentals of physiology and anatomy, the mortality dropped so that now the death rate is at a low limit.

Mortality reduced to a fair minimum, morbidity caught the attention of the profession. Records were taken and published of how long the patient was in bed, how long in the hospital, while little, if any, thought has been given in the statistics of association meetings to the comfort of the patient. It is time now, we feel, with all the large problems in technic settled, that we should think more of comfort, that we should look upon our work as an insult to cell and tissue and endeavor in every way possible to minimize the same and strive through a cultured attention to bring about tissue happiness. Two men have stood out in the limelight as disciples of this thought in determining psychologi-

cal and physiological reactions—Moynihan and Crile.

It is in surgery as it is in everyday life. Little things disturb the most. As it is the little kindnesses which are the greater appreciated, so in surgery the giving of thought to minute matters of detail add materially to the comfort of the patient.

It is a very difficult proposition to modify a person's religion. It is an equally difficult one to influence the average surgeon to alter his methods when his patients are not dying off nor suffering from serious complications.

No physician ever cured an acute disease. Nature instituted the recovery, aided by a good nurse or perhaps a competent midwife. The greatest aid that has come to the modern surgeon is the nurse, who by her presence, manner, tactfulness and help encourages nature in her work. Midwives have a better record than the obstetricians, perhaps, because they are more apt to let nature cure herself.

Canute could not stem the tide, nor can the practitioner prevent nature from following out her varied methods. Back in the beginning, as far off in history as the furthest star is in space, there was attack and danger. The primordial protoplasm had its troubles. Then there gradually developed a method of self-treatment, an enzymic action. Long before there was any nervous system there was a similitude of endocrine function and white cell activity. All physiological properties of the endocrines seemed to be massed into one activity and the fluid content in lower life teemed with white-cells which apparently acted very much as our white cells do.

Every surgeon who wishes to be competent, to excel and to possess a master mind in his work, (the desire of us all), must be a physiologist at heart. He must know physiology and be able to apply it accurately in the interest of the patient during the period preceding the attack, as well as after. Any other type is but an operator, an automaton. One great advantage of this knowledge is that it will offset the prevailing tendency to rely upon the different types of laboratories for reports, a sin which is gaining too great a headway. Not but that they have their value, but a thorough knowledge of symptoms and signs of disease processes explained through action and interaction of tissues is by far to be preferred. Our best thought and our best books in the profession largely antedate laboratory work.

It is still a plan, and one only too often

practised, for a patient to be admitted to a hospital on an afternoon and operated upon the following morning, sometimes with preliminary purging, other times an enema. The commonest anesthetic is ether, more or less properly given. After that comes the scalpel. All this is a demand upon the vital forces, which can be epitomized in physiological terms so that they may be better understood, for we must get away from old-fashioned nomenclature.

It has been well established by clinical experience, experiments and biopsical and pathological observation that as the liver is, so is convalescence. For many years we have noted the appearance of the liver and connected it up with the after-fight and recovery. Physiology tells us that recovery from all illnesses, whether microbic or operative trauma, is in proportion to the activity of the chromaffin substance and the amount of glycogen stored in the liver.

A person hurried into a hospital and up to the operating room is bound to have an annoyed mind, bothered with home and business worries, strange conditions and uncertainty as to the future, all of which are disturbing, and take from the glycogen reserve of the liver. Lack of proper rest and sleep withdraws from the chromaffin substance, particularly the adrenal. To be fair to the patient, to give him a chance to fortify himself physiologically and psychologically, not less than two days should elapse before the surgeon begins his work. Recumbency and rest take off a little from the heart strain, allow it to become a trifle smaller and stronger, and fortifies the circulation. Carbohydrate diet, which always contains a certain amount of protein, should be established. In lieu of that, a tumblerful every four hours or oftener of 10 per cent glucose and lemon, (the oxymel of the Ancients), should be administered and every effort made to forestall dehydration. To load up the liver to its full capacity of glycogen (which is 17 per cent in man), and through sleep add to the efficiency of the chromaffin substance. Sleep is the only thing which will bring the chromaffin tissue back to its normal activity. There is no drug or other treatment known. A few days in an "optimistic" hospital, becoming accustomed to sounds and strange conditions will allow the patient's mind to calm down and sleep to come. A patient who has slept and rested well and taken plentifully of carbohydrate diet and glucose drinks is in the best condition for the work to follow.

The profession is trying to break away from ether, but as yet there are not enough experts with gas-oxygen to make that method a safe one to employ universally. The local application of procaine also requires expert administration by a man whose mind is adapted to such a procedure. We are still compelled to depend in large part upon ether, and although ether anesthesia is a tonic and does not depress the blood tension during an operation of ordinary length, it does allow a certain amount of glycogen to be taken from the liver. Ether takes away consciousness, that is, it acts upon the intellectual centres, but has no material effect in protecting the lower centres. As a result, every cut, every touch, every drag is as much a pain and distress to the patient as if he could groan and complain as in the pre-anesthetic days.

The peritoneum is super-sensitive. Touching or running the hand under it, putting in retractors to make better access so that the surgeon may be comfortable in his work, send a reflex effect upwards into the sympathetic. Gauze packing is another grievous affront in our technic. It is very common to see a wound packed voluminously and forcibly with wet gauzes, treating the contents of the abdomen as if a grudge was held against them. Sometimes this is absolutely necessary, but many times it is not. The hand and the instruments then go in and altogether too often the assistant mops and mops. It is blow after blow. Cells and tissues are tortured and tormented. They speak not with the voice, but later demonstrate themselves in reaction.

The organs of the abdomen are essentially reptilian. They are not active under the presence of oxygen, but are so in the presence of carbonic acid gas. The liver cells must be soaked with carbonized blood. The amount of oxygen going in by the hepatic artery is largely taken up, apparently, by the parenchyma. In the stomach and small intestines nature has provided the veins with certain valves at the exit to retard the outward flow so that the nerve-net and the involuntary muscles are bathed with more carbonic acid than most of the body tissues.

On opening the abdomen it is observed that the intestines are bluish in appearance and smaller in calibre. After a few minutes' exposure they balloon and become pink because of the evaporation of carbonic acid through the peritoneum. This red-blood oxygen passes up to the liver and

the liver cells have brought to them that which they had before, oxygen. What the effect is has not, as yet, been demonstrated. but our surmise is that it must interfere with their normal function. At any rate, during the operation and during all the time these atrocities are being perpetrated (if we may use the term), more glycogen is being eliminated to enable the sympathetic, that is, the adrenal, to combat the onslaught as best it can.

The first province of the sympathetic is to promptly produce a stasis. Auscultation of the abdomen before an operation will elicit the usual sounds, but when an abdomen is opened not an intestine is seen in motion. Everything has quieted down, for the sympathetic inhibits activity through the nerve-net.

The pneumogastric is a nerve of motion, but when irritated sends an impulse to the brain which comes back to the sympathetic and facilitates its action. If the glycogen has been brought down to a minimum and the patient has not had sufficient rest, each cell of the body, particularly those in the cranial cavity, will have an imbalance in their acid-alkaline relation and cell acidosis is produced. Nausea, vomiting, insomnia, restlessness and general body discomfort are all the result of want of care as to the needs of the body cells.

An open abdomen is deleterious in another way, in a lowering of the temperature of the visceral circulation, particularly that of the liver, which works at a somewhat higher temperature than that of the rest of the body. To cool it down materially is to interfere with its action, and, if the supposition be correct, that there is a hormone made in its substance necessary for the vitalization of the cerebral cells, a chilling even to a slight degree carries serious dangers in certain types of people.

Our experience of 1876, which was loudly protested against as we left the amphitheatre, was horrible to the onlooker, but the beautifully towelled operation of today may be quite as rude to the all unconscious patient.

The lesson to be learned through physiological thought is that to be well vitalized the chromosomes (particularly those in the brain, liver, adrenals, and thyroid) should sleep. Sleep is their only restorer and it should be had plentifully, thereby establishing their greatest potentiality. Recumbent rest should be given to restore circulation and strengthen the heart, and a diet instituted which will send glycogen

to the liver and anchor it here—carbohydrate with a moderate amount of proteid. Lastly, and firstly, extreme gentleness in all manipulations should be employed. This can not be taught, but must be learned through experience with the mind centered in the intrinsic tendencies and needs of cells and tissues. To defy nature is to invite disaster.

IMPRESSIONS OF HAVANA PUBLIC HEALTH SERVICE AND HOSPITALS

WALTER J. CREE, M. D.

DETROIT, MICHIGAN

For a number of years I have spent a couple of months during the winter in Havana, Cuba, usually from the middle of January until the first of April, and have found it an ideal place for rest and recreation. In the Detroit Free Press of April 14th, 1928, there is a short article written by George Matthew Adams and he says: "Havana is one of the most interesting cities these eyes have ever seen; there isn't a city in all America so clean." He said other fine things about the city, but I have quoted enough. Aristides Agramonte, M. D., Sc. D., Professor at the University of Havana, and formerly secretary of Public Health and Charities, speaks of Havana as a wonderful health resort, especially during the winter months. The doctor was a co-worker in the fight against yellow fever in Cuba and the only one living. Doctors Reed, Lazear and Major Carroll are dead, but the great benefits following the work of these men are inestimable.

I am told that the summer months are not bad, as the nights are always cool. In the sun it is hot, but in the shade it is comfortable. And the city is fanned by the ocean breezes.

Cuba is noted for the absence of diseases that are peculiar to tropical countries. Yellow fever and small pox are practically extinct. Typhus fever and sleeping sickness are unknown. The Health Department put on an educational program for the benefit of the people. Scientific facts are published in the daily papers and there is a monthly publication dealing with

health affairs, a procedure which has been of great benefit.

Some of the theater programs carry short lessons of health to the people, advising them as to sanitary conditions, the simple treatment of minor complaints from a prophylactic standpoint, and a continual reminder "not to delay, but send for your doctor." This, in combination with fresh air and sunshine—and there is plenty of both—tends to make a city in which life is worth living. Only a few years ago I recall a threatened epidemic of typhoid which was nipped in the bud by compulsory vaccination.

All food handlers, cooks, waiters, barbers and bartenders are examined at stated intervals and woe betide the worker who fails to come up for his examination. If sickness occurs to the help, the proprietor must report the case. Barber shops are equipped with sanitary appliances, not only in Havana, but in all the small towns I have visited. The people wear light clothing and bathe frequently, which is also conducive to good health.

The collection of garbage is very thorough and daily. Large vans announce their coming by a well known blast of horns and the receptacles are speedily placed in front of the premises and quickly placed in the vans. Small amounts are wrapped in paper. A crew of eight men do the work rapidly, but with some noise. These vans drive to a loading dock on the bay, the garbage is deposited on scows, which are towed out into the ocean and dumped. The streets are very clean, scraps of paper are rarely seen, and much of this is due to the educational campaign. All theater programs, circulars and other advertising matter have printed prominently a request not to throw this paper on the street. "*Ciudadanos! Ayúdenos en nuestra labor de conservar la limpieza de la ciudad. No arrojando este programa en la vía pública*" —(Citizens! Help us in our work to preserve the cleanliness of the city. Do not throw this program in the street.)

Drug stores are under supervision of the Sanitary Department and must conform to certain regulations. The store must be in a sanitary condition, maintain a supply of medicines and surgical equipment for emergency use. Some months ago a few of the stores were found not to be living up to the rules of the department and were given a sufficient time to correct their ways or suffer the penalty of being closed.

There are a large number of fine pharmacies and drug supply houses and

NOTE—Dr. Walter J. Cree is an old member of the Michigan State Medical Society. At the expiration of forty years in general practice he was made an "honor" member of the Wayne County Medical Society. He has made frequent holiday trips to Cuba and his paper will appeal not only to the profession in general, but especially to those who are nearing the half century of active practice.—Editor.

anything obtainable in the United States can be found in Havana. The surgical supply stores carry a full line of all surgical and dental necessities. Certain drug stores are open all night. The telephone guide and newspapers carry a list of the stores open each particular night in the week and this makes it convenient for anyone in need to locate the nearest pharmacy with ease.

The Sanitary Department have recently placed in use for the benefit of school children, an ambulance fully equipped with dental supplies, in fact, a complete dentist's office. Daily visits are made each school. This is for emergency work and is another factor in the educational campaign. The school children are in uniform, the girls in white waists and blue skirts, the boys in brown linen. They present a neat appearance.

A Cuban law requires that cafes, restaurants, saloons, etc., give free, a glass of cold water to those who request it.

The Cubans are great lovers of sweet drinks and while any quantity and all kinds of pre-Volstead drinks are obtainable, it is rarely that one sees a native under the weather. As for the tourists, there is another story.

Havana is well supplied with hospitals. There is a training school for men and women and a special building for tubercular cases. There are a number of smaller hospitals maintained by private individuals or benefit societies and they, too, have a very important part in maintaining the health of the city. San Lazaro Leprosy Hospital is situated near Rincon, a few miles from Havana, and has capacity for 200 cases. I had the opportunity of visiting this hospital through the courtesy of Francisco M. Fernandez, Minister of Public Health and Hospitals, and Dr. J. E. Lopez Silvero of the same department, and was well rewarded by my visit. Everything in and about the institution is spotlessly clean and as it seemed to me, the patients enjoyed their surroundings as much as possible under their affliction. Much is done for the pleasure and comfort of the patients. In a large assembly hall entertainments are frequent, motion pictures shown weekly and a radio does its share. Billiards, pool, cards, chess, etc., offer a source of entertainment. No one could receive better care than do these unfortunate people and great credit is due the Sanitary Department for its good work. I saw many cases in different stages and the more special ones were shown me by Dr.

Carlos M. Pernia, director in charge of the hospital, to whom I am very grateful for the courtesy shown.

Besides the hospitals mentioned, there are a number of "Los Hospitales Particulares" (The private hospitals). These are in connection with numerous "Circulos" (clubs) and Havana is a city of clubs. The members are assessed a certain amount monthly and in return have the opportunity of meeting people from the provinces of their ancestors; young people receive night instruction in all branches of education; medical and surgical service is also included. Some of the club buildings are beautiful examples of the architect's vision.

El Sanatorio—"Covadonga", the hospital of the Centro-Asturiano Club, with a capacity for nearly 900 patients and equipment not excelled by any institution.

La Purisima Concepcion is the hospital of the Association de Dependientes—(Clerks' Club) with a capacity for nearly 800 patients, and the buildings are beautiful.

La Beneficia of the Centro Gallego Club is another fine institution with a capacity for about 700 patients.

Other hospitals, such as the Santa Teresa de Jesus, Nuestra Senora de Candelaria, Hijas de Galicia, La Balear, do a very important part in keeping up the health of the city. The staffs are made up of men of highest rank and a national and world-wide reputation. I have had the pleasure of meeting quite a number of the fraternity and have found them very cordial and ever willing to aid and assist a visiting physician.

I have been taking my vacation during the winter for a number of years and have found no better place than Havana. I have met members of our State Society there and believe they agree with me.

Havana is a large city and very interesting from a historical point of view. In the older parts of the city, one finds the narrow streets, the old houses and Havana as it was in days gone by. The newer Havana has broad streets, modern homes of the Spanish type. The city is generously supplied with parks and monuments. There are churches of all denominations. The old Columbus Cathedral, built in 1704, is of interest and the mural decorations in some of these old edifices are remarkable. Amusements of all sorts as one desires. Horse racing, Jai-Alai (The Spanish handball), the Casino—the Monte Carlo of the

western hemisphere, where all games of chance are indulged in for better or worse. The old forts and other historical buildings command one's attention. There are three English daily papers and about twenty Spanish dailies, besides numerous weeklies, illustrated and otherwise. Large numbers of cars of foreign make keep company with the high priced American ones. Taxi drivers use the Chevrolet and Ford almost exclusively, drive all over the street with apparent abandon, but accidents are very rare. The drivers are very courteous to the pedestrian, an example which might well be followed in our country. The streets can be crossed in safety. The city is full of restaurants of all sorts and nationalities. Hotels are numerous and any sized pocket book can be suited. The annual "Carnaval" during February and March is very interesting, especially when viewed for the first time. Decorated autos pass along the route of the parade for several hours and the air is full of confetti, serpentinas, etc. Decorated floats and pretty girls in costume beautify the scene. Immense crowds come in from the surrounding country and yet there is perfect order. The Havana police, and they are one of the best in the world, have a method of handling crowds and very little friction is noted.

The people in Cuba are very friendly to their northern brothers and show the tourist every attention. If one is trying to acquire a working knowledge of Spanish he is helped and not ridiculed, as is sometimes done in this country when a foreigner wishes to make himself understood. Altogether I believe that a vacation, even for a few weeks, is productive of a good deal of pleasure and profit, if spent in Cuba.

SOME PHASES OF INDUSTRIAL (FACTORY) EYE SURGERY

DON M. CAMPBELL, M.D.L.R.C.S. (Edin)

DETROIT, MICHIGAN

The importance of medical and surgical work to Modern Industry, is well illustrated by the fact that in the January, 1926, edition of their Annals, the American Academy of Political and Social Science devotes the entire issue of 224 pages, made up of 43 articles by the foremost executives, industrial surgeons, safety engineers, teachers, publicists and government experts, to the consideration of the various phases of industrial safety.

Furthermore, it has been found that in well over 50 per cent of all factory injuries, the eyes are more or less seriously involved, hence one may safely conclude that the phase of industrial acci-

dents in which we are particularly interested, occupies no mean place.

The economic side of the situation is very important to everybody concerned, but there is the other human side which is quite if not even more absorbing.

This workman leaves his home in the early morning hours—starts his day's work, and presently received a wound which always means loss of time and reduction of pay—frequently permanent loss of function, sometimes loss of part of his body, and occasionally, loss of his life.

This man has made a tremendous contribution to industry—also industry sustains a great loss from his inability to work; so, the preservation of the health and efficiency of the workman becomes one of the *most* important outstanding problems in the economic condition of any and all great industrial efforts—accepted and believed in by all.

Some of our efforts to prevent trouble—to combat it when it comes—to correct or compensate for its ravages, will be presented tonight.

The first slide which I shall show, is interesting, as illustrating several important statistical points of great value.

The tabulation was made for and published in an article by Campbell and Carter, which appeared in the American Journal of Ophthalmology.

The slides which follow, refer specifically to the questions of the management of a certain phase of industrial ocular injury—viz—the retained foreign body—its location, diagnosis, and the best methods known for its removal.

Following these, there is a series dealing with more general aspects of industrial injuries, which it is hoped, will carry a message of value to those not peculiarly interested in the purely medical and surgical sides of the subject.

There will then follow a number of contributions by our guest, after which, a general discussion will be held.

Local treatment consisted in curetting of the ulceration—the use of a fortified Lugals solution—according to the technic of Vierhoff—was employed, as was also in many of the cases, the actual cautery.

The eyes were kept scrupulously clean by warm boric solution bathing and atropine employed to keep the pupil dilated.

Foreign proteins, including pasteurized milk and particularly in this series diphtheritic antitoxin were used systematically.

The antitoxin was also used locally and our progress notes show that the latter form of local and constitutional management gave us the best results.

Question—Can medicine enter into a constructive program with industry, looking:—

First—To the reduction of industrial accidents and disabilities to a minimum;

Third—To educating the artisan and the worker to the point where labor will recognize the immense economic and physical benefit coming to it from such a program.

The answer, not far to seek, is in the affirmative, and is found in a consideration of one of the really shining bright spots in the history of modern medicine, and it is that one where the profession threw off its provincialism, joined hands with industry and made a really essential contribution to human industrial economic progress, and so made it physically possible to build the Panama Canal.

In Africa, a great British doctor is doing the same thing for his own countrymen—Balfour, the

Gorgas of Africa, has made it safe for labor on the Nile, and the great dam at Assouan—one and a quarter miles long—emerges.

A far greater opportunity is knocking at our doors today, when the throbbing industrial life of America needs our help. Shall we embrace it?

SUMMARY

1. We wish to emphasize the great importance of proper treatment for minor injuries to the eye.

2. That 92.1 per cent of all the industrial injuries seen in our office were originally minor injuries.

3. That many of these show great loss of vision because of opacity of the cornea following infection.

4. The cornea suffered injury in 78 per cent of our cases.

5. That all corneal injuries should be seen promptly by a competent oculist and closely followed and observed for infection.

6. We would advise the removal of an intra-ocular foreign body over the posterior route only in those cases with an open wound in the sclera through which the extraction can be made, and in those cases where an attempt at removal over the anterior route has failed.

NEW METHOD OF BLOOD TRANSFUSION REPORTED

A new and safer method of transfusing blood into little children and babies suffering from severe infections or a lack of life fluid was reported to the American Medical Association at Minneapolis by Drs. W. C. C. Cole and J. C. Montgomery of Detroit. The usual method of making a blood donation from a well person to the patient is to inject the blood into a vein, a procedure that is sometimes difficult and dangerous. The Detroit physicians inject the reviving blood directly into the peritoneal cavity, the portion of the body that contains the stomach, bladder, bowels and other organs. They have used this method for 237 transfusions on 117 patients with promising results. Unwelcome reactions upon the patient are sometimes avoided and the method is so simple that every physician should be able to use it when the usual method of blood transfusion can not be used. Science Service.

APHORISMS

(From "The Doctor Looks at Love and Life,"
By Dr. Joseph Collins.)

The more any system of theosophic or esoteric doctrine is attacked by sense and logic, the more it flourishes.

What compulsory education does for many is to make them discontented with their lot, to make poor clerks out of good laborers, unsatisfactory ladies and gentlemen out of competent "help."

Most people do not want to think; they find it disagreeable and exhausting. They want to do things that will prevent them from thinking—read, listen to the radio, look at moving pictures.

Novels do not contribute to our fundamental culture. Most of them are a potent antidote to thought and they are among the most efficient ways to waste the only thing that never can be replaced: time.

When we learn to play with a certain measure of success, or when we become habituated to it, our inclination is to standardize it, or to limit it to the elect. Thus golf today is a rich man's game, played oftener to display prowess than to secure relaxation. We play for records and we work for riches.

College education is now to be obtained, mostly, by those who are in funds, while it should be exclusively for the benefit of those who can best profit by it. Is it better to give University training to a rich high-grade imbecile, or to an intelligent boy handicapped by poverty? The common sense answer is not consistent with the general practice.

Open-mindedness does not flow from the sort of education that is given our children and youth. Pedagogy awaits a Martin Luther, Sociology a Votaire. Our bell-cows should be slaughtered, and the bells melted. The young should be taught how to think. Thought is the expression of power in its highest and noblest form. It is the enemy of privilege, the friend of mercy, the proponent of justice.

Submitted to the intelligence, the doctrine of Christian Science is repellant; submitted to the emotions, it is satisfying. One may take the diphtheria organism, which is as real as a rabbit, whose life's cycle is as knowable as man's, put it in the mucous membrane of the upper air-passages of an individual, watch it develop and strangle him; the spark of life having been extinguished, the remains are buried or incinerated; still it is not real! It is not real if life and death are not real.

Just in proportion as our material prosperity has increased, our spiritual prosperity has diminished. Liberty, as the architects and builders of the nation understood it, does not exist any more. Our government gets more paternalistic and centralized every year and the time is in sight when all of man's conduct will be regulated by law. It will tell him where he can go and when; what he can indulge in and what he must avoid; what he may study and what he shall not read; how he must dress and what he cannot put on or leave off.

Real education is not that which is gleaned from text-books, and the preparation of the soil must be that which teaches the individual to desire education. The wish to learn is the sine qua non of adult education. A man may acquire a vast amount of information and be uneducated; he may have spent his time dreaming with the great poets, thrilling with the immortal musicians, communing with Nature, and be more educated than his University brother whose sum of acquired knowledge has not imbued him with curiosity and constructiveness, the basis of all intellectual life. Education has another function, an important one: to develop sympathy and create open-mindedness.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner*

The work done by the Bureau of Laboratories for the two year period ended June 30, 1928 is indicated by the following excerpts from the bureau's biennial report.

"A review of the Houghton Laboratory report for 1926 to 1928 shows a decrease in diphtheria and typhoid work. This lowered the total number of examinations made for the first half of the period, but was compensated for in the next half by an increase in other examinations, particularly venereal disease work, which brought the total to its 1926 level. The average number of examinations made by each of the scientific personnel was 845.

"A noteworthy addition to the laboratory service in the state was the opening on September 1, 1926 of an extension laboratory in Grand Rapids, known as the Western Michigan Division Laboratory. Exactly the same character of work is done as in the central laboratory in Lansing and its personnel is interchangeable with that at Lansing.

"In deciding the location of the extension, railroad facilities were taken into account. Placed as it is, it receives specimens from most of the western part of the state without mail transfers and thus can give quick service. This great step in advance was made possible by the co-operation of the State Administrative Board and the City Commissioners of Grand Rapids. The quarters furnished by the City Commission are absolutely ideal. The old city hospital building was completely remodeled, giving the best possible arrangement for the installation of the scientific equipment furnished by the Michigan Department of Health. That this service has been appreciated is evidenced by the reports of the Western Michigan Division laboratory which show a 43 per cent increase in the examinations made in the second year of its existence.

"Much of the work done is for the city of Grand Rapids. This is especially true of the work in throat infections for the release of patients from quarantine in the contagious hospitals.

"The number of milk samples examined is unusually large. Most of them come from the Grand Rapids area, but many, being examined in co-operation with the Department of Agriculture, are brought

from nearby counties by the inspectors of that department. The Grand Rapids laboratory tests milk products, the examination including plate count, Babcock test and specific gravity.

An average of 1,140 examinations per month was made by each of the scientific personnel at Grand Rapids during this two-year period.

"The work in the Lansing laboratory was appreciably lightened by the installation of the Western Michigan Division laboratory, the number of examinations made in Lansing decreasing in all of the communicable disease work. A decided increase in the number of body fluids examined is indicated by the increase in animal inoculations. This figure represents, almost entirely, animals inoculated with specimens to show the presence or absence of tubercle bacilli.

"On April 1, 1927, blood chemistry examinations were discontinued as one of the free diagnostic tests run in the laboratories of the Michigan Department of Health, but were continued on a fee basis, the regular commercial laboratory fee being maintained.

"Water and sewage work remains important, partly due to outside influence. The Bureau of Engineering has continued its survey of the water supplies along the main highways of the state, and instituted, but only partially completed, a survey of the water supplies of the rural schools.

"The problem of stream pollution is gradually developing. In co-operation with the Department of Conservation, this department collects and analyzes samples of water and sewage. After a study of the character of the pollution and experiments to determine the best means of waste disposal, recommendations are made to the industries based upon the findings. Up to the present time, particular study has been given to tanning factory wastes and to those from milk products. Each of these industries raised a sum of money to be used in studying their wastes in an experimental plant under the supervision of this department. Many valuable facts were discovered by the work by which both the industries and the state gained.

"One of the new practical phases of the laboratory research work is the prepara-

tion of bacteriophage in the place of autogenous vaccines as a specific therapeutic for furunculosis, acne and other skin infections. When physicians send cultures from such infections for autogenous vaccines, staphylococcus, if found, is tested for susceptibility to lysis of bacteriophage and if found to be susceptible, it is suggested that the physician try bacteriophage instead of the vaccine. The results obtained by private practitioners and in state institutions have been encouraging.

"This phase of the research work has entailed intensive investigation of many problems directly connected with it but which have an application to broader fields, such as filterable forms of bacteria; and antigen with special reference to the effects of bacterial dissociation.

"Examinations in the clinic room of the laboratory have increased. Effort is made to keep such examinations as few as possible. No interference with physicians is possible, however, as only such patients are taken as have written requests from their physicians that certain specimens be collected or certain tests be made. There were 952 persons treated in the clinic room during the first half of the period and 865 persons during the second half. A little over 10 per cent of those treated represented persons in laboratory work receiving toxin-antitoxin vaccines, Dick and Schick tests for the most part. The others are persons sent by their doctors for blood counts, Kahn tests, sensitization tests for hayfever, darkfield examinations, et cetera; state police for physical examinations; state employes for dressing to injuries sustained during duty.

"The extension work of the laboratory has been continued. A class has been given for the nurses of the Lansing hospitals, meeting twice each week in the evening during the winter months. The nurses learn the uses of a public health laboratory and the handling of communicable diseases from a laboratory point of view. Classes are also given for students from Michigan State College. These consist of a four hour period daily, three days a week during a term. Public health methods are given in practical work with one lecture a week. An examination on laboratory procedure must be passed at the end of the term before credit is granted. During the past year six students enrolled in the course, six others having completed the course the preceding year.

"The laboratory is visited each year by many interested in administrative prob-

lems of public health work and in certain methods in use here. During the past two years the directors of four state laboratories each spent several days in the laboratory as did several directors of city laboratories. We were also visited by doctors traveling on a Rockefeller Fellowship, two from Bulgaria, two from Ceylon, one from Jugo-Slavia, one from Brazil, two from India, one from Mexico and one from Spain. Each remained for at least six weeks. Other foreign visitors have come for observation and spent shorter periods of time.

"The 1927 Legislature passed several bills which indicate a widening of scope in the work of the laboratory. One provides that all laboratories where live pathogenic germs are handled be licensed. Before any pathogenic organisms are distributed, the license number of the laboratory to which they are given must be known. The act, in addition to its main purpose of supervising places where infectious organisms are handled, will bring the laboratories in the state into closer touch with the laboratories of the Michigan Department of Health. Ninety-two laboratories were registered during the first year of the law.

"Another bill provides for the manufacture and distribution of antitoxin and other biological products for use in the control of communicable diseases by the Michigan Department of Health. This act allows the activities of the Biologic Products Division to be extended.

"A third bill provided that all taxi drivers have a Kahn test before a license for driving be granted them. This law greatly increased the number of Kahn tests made, but instead of doing them all in a small space of time as had been anticipated, they lagged throughout the entire year.

"An important factor in the decrease of routine laboratory examinations during the past year is the increasing number of municipal and private laboratories established throughout the state. Where such laboratories exist, very little work is sent to the state laboratories except, perhaps, blood for Kahn reaction, cultures for virulence test or specimens on which special work is wished. This development is a welcome one, however, as the chief aim of the laboratories of the Michigan Department of Health is to act as guide in new methods and procedures in laboratory diagnosis, a clearing house for technical problems, and a leader in research work.

“That research work is constantly being carried on by the members of the laboratory personnel is evidenced by the number of scientific articles published during this two year period.

Number of Tests per Physician in Michigan.....	44.1	50.2
Number of Tests per 1,000 people made in Lansing Laboratory	35.4	35.2
Number of Tests per 1,000 people made in Houghton Laboratory	4.3	4.7
Number of Tests per 1,000 people made in Grand Rapids Laboratory	11.6	16.2

Report of the Biologic Products Division will be printed in the next issue of the Journal.

Dr. Robert P. Stark, connected with the staff of the Bureau of Epidemiology since January, 1928, died at the University Hospital on Tuesday, August 14, of uremia. Dr. Stark was a graduate of the University of Michigan Medical School, and was, for a number of years, in private practice in Allegan.

Dr. C. S. Moore of Cadillac, health officer of the newly organized Wexford County health unit, has returned from taking a course at the Rockefeller Foundation Training School for county health officers at Greenville, Ohio. Dr. Moore will spend some time in Lansing at the Michigan Department of Health, and will go from there to Pontiac and Saginaw, to observe the work of the Oakland and Saginaw County health departments.

Dr. W. J. V. Deacon, director of the Bureau of Records and Statistics, returned to Lansing on July 30 after a four months' leave of absence spent at the Texas Department of Health, assisting in the effort to bring that state up to the standards set for admission to the Registration Area. Dr. Deacon was in charge of a staff of ten persons working under the Federal Census Bureau and the American Public Health Association's committee to aid in the completion of the Registration Area. Texas is the largest of the five states still outside the area, and special interest centered in the campaign in that state. While the objective was not reached during Dr. Deacon's stay in Texas, he feels that definite progress was made, especially along the line of arousing public interest in and support for the measure.

VISITS OF ENGINEERS DURING THE MONTHS OF JULY AND AUGUST, 1928

Inspections of Railroad Water Supplies: total 62.

Bay City	Bessemer
Benton Harbor	Cadillac (2)

Calumet	Manistique (2)
Caro (2)	Marquette (2)
Caseville (2)	Menominee (3)
Channing	Munising
Crystal Falls	Pentwater
Escanaba	Petoskey
Frankfort (3)	Port Austin (2)
Gladstone	Port Hope
Gladwin	Port Huron (3)
Grand Haven	Richmond
Grayling (2)	Saginaw
Houghton (2)	Shingleton (2)
Iron Mountain	Sault Ste. Marie
Iron River (2)	Stambaugh
Ishpeming	Thomaston
Keweenaw Bay	Traverse City (2)
Ludington	Wakefield
Mackinaw Island	Watersvliet
Manistee (2)	Watersmeet
Marine City	Wells

Inspections and Conferences, Sewerage and Sewage Disposal: total 73.

Alma	Muskegon
Bay City	Muskegon Hts. (10)
Birmingham	Mt. Clemens
Caro (2)	Paw Paw
Clio	Pentwater
Comstock	Pinconning
Dearborn	Pine Lake
Durand	Plainwell
East Grand Rapids	Pontiac (2)
Eloise	Rochester (2)
Fenton	Royal Oak
Fremont	Saginaw (3)
Grand Ledge	Sandusky
Grandville	South Haven
Grayling (2)	Sparta (3)
Gregory	St. Charles
Hart (3)	Standish
Hillsdale	Sturgis
Holland	Tashmoo Park
Ithaca (2)	Vicksburg
Jackson (3)	Walled Lake
Lansing	Wequetonsing
Lincoln Park	Yale
Long Lake (3)	Zeeland
Ludington	

Inspections and Conferences, Water Supplies: total 134.

Adrian	Hancock (2)
Algonac	Harbor Springs
Alma (3)	Highland Park (2)
Anchor Bay Beach	Houghton (4)
Baraga (2)	Iron Mountain (2)
Bay City (2)	Ishpeming
Bellaire	Kalamazoo (2)
Boyne Falls	Kalkaska
Boyne City	Kingsford (2)
Brighton	Lake City
Calumet	Lake Gobeic (3)
Central Lake	Ludington (2)
Clare	Mackinaw City
Clio	Mancelona
Crystal Falls (3)	Manistee (2)
Denton	Manistique (2)
East Jordan	Marine City (2)
Edmore	Marioin
Evart	Marlete (3)
Fairhaven	Marquette (4)
Freeport	McBain
Grand Haven (2)	Monroe
Grand Ledge	Mt. Clemens (2)
Grayling (4)	Mt. Pleasant (2)
Gregory	Munising (3)

Negaunee (5)	Romulus
Newaygo (2)	Sault Ste. Marie (5)
New Baltimore (2)	Sheridan
New Buffalo (3)	Sibley Quarry
Newberry	Stanton
New Hudson	St. Clair (2)
North Shores	St. Ignace (2)
Northville (3)	Sturgis (2)
Onsted	Three Oaks (2)
Ontonagon (2)	Trenton (2)
Pequaming	Utica (3)
Plainwell (2)	White Pigeon (2)
Plymouth	Wyandotte
Rochester	

Inspections and Conferences, Stream Pollution: total 21.

Bay City	Munising (3)
Birmingham	Muskegon Heights
Fordson (Baby Creek)	Newberry (3)
Hart (2)	Rapid River (2)
Lansing (2)	Scottville (2)
Marquette (2)	Standish

Inspections and Conferences, Institutions: total 10.

Eaton Rapids, V.F.W., National Home, Sewage Disposal.
Grayling, Camp Grayling, Sewers and Water (3)
Hillsdale, County Farm, Sewage Disposal
Ionia, Hosp. of Criminally Insane, Sewage Disposal
Jackson, State Prison, Sewage Disposal
Muskegon County T. B. Sanatorium, Sewage Disposal
Wayne County Training School, Water (2)

Inspection and Conferences, Camps: total 15.

Adrian, Camp Wolverine, Boy Scouts, Inspection
Ann Arbor, Camp Newkirk, Boy Scouts, Inspection
Augusta, Camp Ben Johnson, Sanitation (3)
Buchanan, Camp Sanitation (3)
Fenton, Flint Boy Scout Camp, Sanitation
Jackson, Tee-Tonk-Ah, Boy Scouts, Inspection
Mt. Clemens, Camp Rotary, Water and Sewage Disposal
South Haven, Camp Fire Girls, Water Supply
Sturgis, Camp Wolverine, Sanitation (2)
Waterford, Detroit Boy Scout Camp Brady, Sanitation

Inspections and Conferences, Miscellaneous: total 30.

Bay City, Beach Sanitation
Bay City, Drainage
Buchanan, Private Nuisance (3)
Centerline, Nuisance
Coldwater, Inspection of well (2)
Fenton (Long Lake), Typhoid
Freeport, Drainage
Glenn, Pollution along Lake Michigan
Gowen, Pollution of Lincoln Lake
Lansing, Sanitary Toilets for Schools (2)
Lansing, Oil Nuisance
Mackinaw City, Septic tank at State Park (2)
Mason, Nuisance
Merrill, Ditch Nuisance (2)
Pine Lake, Resort Sanitation (4)
Pontiac, Nuisance (2)

Romulus, Sanitation at Cemetery
Sawyer, Sanitation
Sylvan Lake, Drainage (2)

Inspections of Swimming Pools: total 3.

Flint (2)
Grand Rapids

Roadside Water Survey:

Trunk Line covered, collecting samples, 1,590 miles
Samples collected, 275
Trunk lines covered posting samples, 4,084 miles
School wells tested, 69
Gas stations and garage wells, 88
Tourist camp wells, 8

PREVALENCE OF DISEASE

	August Report			
	Cases Reported			
	July 1928	August 1928	August 1927	Av. 5 Years
Pneumonia	186	158	122	118
Tuberculosis	270	697	447	442
Typhoid Fever	20	70	88	96
Diphtheria	210	239	212	283
Whooping Cough	789	1,404	674	643
Scarlet Fever	392	264	298	327
Measles	1,197	185	103	193
Smallpox	89	50	59	51
Meningitis	16	17	3	5
Poliomyelitis	1	3	31	28
Syphilis	1,085	982	1,424	1,100
Gonorrhea	740	635	940	840
Chancroid	10	9	13	13

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

	August, 1928			Total
	+	—	+—	
Throat Swabs for Diphtheria.....				816
Diagnosis	15	210		
Release	119	116		
Carrier	7	333		
Virulence Tests	15	1		
Throat Swabs for Hemolytic				556
Streptococci				
Diagnosis	84	132		
Carrier	70	270		
Throat Swabs for Vincent's.....	16	209		225
Syphilis				8087
Kahn	1218	6812	54	
Wassermann		3		
Darkfield				
Examination for Gonococci.....	118	1357		1475
B. Tuberculosis				456
Sputum	62	347		
Animal		47		
Typhoid				191
Feces	7	60		
Blood Cultures	2	49		
Widals	8	56		
Urine		9		
B. Abortus	5	43		48
Dysentery				60
Intestinal Parasites				13
Transudates and Exudates.....				240
Blood Examinations (not classified)				110
Urine Examinations (not classified)				300
Water and Sewage Examinations				461
Milk Examinations				50
Toxicological Examinations				
Autogenous Vaccines				1
Supplementary Examinations.....				143
Unclassified Examinations				518
Total for the month				13750
Cumulative Total (fiscal year)				17261
Increase over this month last year				669
Outfits mailed out.....				18105
Examinations made by Houghton Laboratory				1444
Examinations made by Grand Rapids Laboratory				5865

THE JOURNAL

OF THE

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Contributors are responsible for all statements, conclusions and methods in presenting their subjects. Their views may or may not be in agreement with those of the editor. The aim, however, is to allow authors as great latitude as the general policy of The Journal and the demands on its space may permit. The right to reduce in length or to reject any article is reserved. Articles are accepted for publication on condition that they are contributed solely to this Journal.

All communications regarding advertising and subscriptions should be addressed to F. C. Warnshuis, M. D., Suite 1508 Grand Rapids National Bank Bldg., Grand Rapids, Michigan.

OCTOBER, 1928

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

MEDICAL EDUCATION

This is a subject of perennial importance no matter how many the intervening years since our own graduation. The medical colleges are for the most part the sources of new discoveries, if any, in medicine. It is in these institutions that time and facilities are afforded for research. True, many of the discoveries of the past have been the work of persons laboring alone, yet even the lone investigator is apt to have affiliations with some institution of learning. Then, again, we are interested on account of the roster of graduates each year whose presence has its influence on the field of medical practice.

The Journal of the American Medical Association performs a valuable statistical service each year in the publication of a special educational number, this year on August 18th. In spite of the crowded condition of the profession there is a tendency

each year for an increase in the number of persons seeking to enter it. The total number of medical students this year is 20,545, an increase of 883 over 1927. The total number of medical graduates June, 1928, was 4,262, or 227 more than last year. There is a disposition on the part of those looking forward to a medical career to pursue a more intensive pre-medical training. The last graduation showed 63.6 per cent of all graduates to be the holders of college degrees. Not only is there a tendency toward a more thorough pre-medical training, but the courses in the medical schools have become more extensive and intensive. A whole month has been added to the medical year as compared with twenty years ago, and in many instances an extra year to the course within less than a quarter of a century. There is a further tendency for the attendance of the Class A college to increase and that of the Class B and C colleges to decrease. The reason, of course, is obvious.

Then comes an interesting phase, namely, the present cost of medical education. The annual fees range from \$150 to \$600 a year; the average being \$300. The tendency since 1910 has been a gradual advance in the cost of tuition. The old time student who, by frugality and industry, put himself through for medicine has become extinct. His successor, however, will doubtless give a good account of himself. While he has been, to a large extent, relieved of the burden of financing himself, his has not been by any means a bed of roses. Never in the history of medicine have the demands made upon the student been so great as they are today. During the past nineteen years over 14,000 registered students dropped out and therefore did not go on to graduation. Doubtless, the great majority of these found the work too arduous.

As mentioned, over 4,200 students received their diplomas and eventually the right to practice medicine in the United States this year. It is stated on good authority that Canada absorbs only about 40 per cent of her own medical graduates. A goodly number of the 60 per cent find their way to the United States. This year the number of Canadian graduates was 444. The distribution of the 1928 graduates would be an interesting study, though impossible on account of the lack of data at the present time. Of recent years there has been a regrettable tendency to specialize without any experience in the general practice of medicine.

COMPENSATORY TISSUE AND DANGER

It has been long recognized that the animal is endowed with much more vital organ tissue than is absolutely necessary to carry on the functioning of life. For instance, one kidney may be removed and if the other is normal, the person may continue indefinitely in a condition of apparent good health. In fact, it has been found experimentally that life function can be carried on with from one-third to one-fourth the kidney substance by which the animal is endowed.

It is quite readily seen that we are endowed with practically twice as much lung tissue as is absolutely necessary to accomplish the aeration of the blood. This fact is apparent to the roentgenologist who sometimes views lungs in which the fibrous-connective tissue and other pathologic changes, such as neoplasms, indicate that only a fraction of the lung tissue is functioning. A sero-fibrinous pleurisy may take up the space normally occupied by one lung, compressing it against the mediastinum; or an entire lung may be put out of commission by means of artificial pneumo-thorax for therapeutic purposes. Pulmonary neoplasms may exist a long time without producing discomfort owing to the compressibility of lung tissue. Even a sero-fibrinous pleurisy, if the fluid is slow in forming, may scarcely incapacitate the patient.

The supra-renal glands are known to play a very important part in physiology. Their complete extirpation means death. However, it has been found at autopsy that these organs may be largely destroyed by tuberculosis and life continue until the final dissolution is by some other or remote pathological condition.

The liver is apparently able to function after a great many of its cells have been destroyed. It has been demonstrated by animal experimentation that three-quarters of the liver may be removed and still preserve its normal function. Pathologists have noted intra-cellular deposits of fat that would tend to decrease the functioning power of the liver and yet death was due to other causes. Man particularly is endowed with a super-abundance of liver cells with which to begin life. These later in life may be replaced to a certain extent apparently with no detriment to the subject.

The pancreas is also provided with a super-abundance of mature cells. It is said

that one-tenth of the volume of a normal pancreas is sufficient to maintain life.*

Everyone knows how much abuse the heart will stand from infection and yet the patient sometimes survives in comfort to an advanced age. The living body has a wonderful faculty for self repair. This, however, is called into being only when restitution of cells is necessary.† In physiological circumstances those tissues which are lowest in the functional scale reproduce the most readily, and as the scale is ascended and function becomes more complex, the ability to regenerate becomes less conspicuous. When a tissue reaches functional perfection, as exhibited by the highly specialized ganglion cells, physiological reproduction does not occur.

The law of compensation is everywhere at work. If one organ be impaired its mate, where it has one, becomes capable of functioning practically for both.

Such being true, it is readily seen how the individual may go on for a long time in a condition of comparative comfort, depending unwittingly on the bodily reserve. Eventually the time arrives when the "factors of safety" become exhausted and without warning the body becomes burdened with disease, the advance of which has been so gradual as to excite no suspicion of its existence. The periodic health examination is a "stock taking" process, whereby the person (we will not use the term patient) may become conscious of his bodily reserves before they are exhausted and begin early conservation.

* Human Factors of Safety. Symmes. New York State Medical Journal.

† Loc. cit.

TOO MANY MEDICAL MEETINGS

The rule has been laid down by certain organizations assuming to control hospital organization matters that the staff of all hospitals organized in accordance with the rules laid down by these organizations shall hold regular monthly meetings. In some communities, especially in the rural districts with small cities having one or two small hospitals, the enforcement of this rule has resulted in the staff meeting taking the place of the regular meetings of the County Medical Society. This is an unfortunate situation, because the purposes of these meetings differ widely in many respects. The chief purpose of the hospital staff meeting should be to discuss matters affecting the hospital organization and the character and results of the treatment of patients carried out in the institution, with a view to securing the best possible efficiency for community service. The County Medical Society, on the other hand, should take up scientific discussions of subjects covering the entire field of medicine, particularly those subjects which will redound to the enlightenment of the physicians doing general practice and who have no direct institutional contact. The County

Medical Society is the unit in our plan of organized medicine and is the only doorway to membership in the state and national organizations. The integrity of the County Society should be maintained regardless of hospital staff or any other meetings, because it is the *one* institution in which *all* reputable medical men have an equal standing and the one which represents the interests of the entire organized medical profession.—Wisconsin Medical Journal.

Not only in the smaller cities, but in the larger as well, from September to the end of May, medical meetings are so frequent they conflict with one another. We endorse the viewpoint of our neighbor journal in its emphasis on the county medical society. This is the only organization which includes the whole profession. It is, as the Wisconsin Medical Journal intimates, the primal unit of organized medicine and therefore the port of entrance to the state and the national society. It is not an uncommon thing to see an attendance of less than 10 per cent of its membership at the county society meetings. Probably at no time in the local history of medicine has it been so important that the physicians identify themselves with and attend regularly their county society.

PRACTICE BEFORE THEORY

As a rule what is known as pure science has preceded the practical application of the results of scientific research. Faraday's work on pure electrical science preceded any practical use to which electricity has since been put. The vacuum tube in the hands of Geissler, and later Crookes, was of no apparent pragmatic value; it remained for Roentgen to make it one of the greatest factors serving human necessity. Hertz, whose name is associated with the Hertzian waves now so familiar to radio enthusiasts, died in 1888, long before wireless was ever discovered. Other examples might be mentioned.

However, this is not always the case. Sometimes the technician, with no knowledge of scientific principles, invents contrivances which were considered impossibilities on scientific grounds. "He didn't know it couldn't be done so he did it." Even so great a physicist as Lord Kelvin considered the "heavier than air" flying machine to be in this class. The presence of the successful aeroplane brought forth many problems for the physicist to expound.

Nor is the condition confined to the realm of physics and chemistry. Until half a century ago our therapeutics was largely empirical. Until within comparatively re-

cent times, who could give a rational or scientific explanation of the employment of mercury in the treatment of syphilis, or quinine in malaria, or citrous fruits in the prevention of scurvy? Man lived a long time before the scientific method came into vogue. A great deal of our knowledge is the result of the so-called "trial and error" method.

HOW THE LAITY LOOK AT IT

It is a truism that if one repeats a statement often enough he will begin to believe it whether there is any truth in it or not. It has been said again and again that the very rich and the very poor receive the best medical service and that the great middle class, the in-betweens, are apt to be neglected or are unable to pay for what the rich receive for a price and what the poor receive for nothing. From nearly a quarter of a century's association with the medical profession, we have never accepted this statement as fact. However, it has inspired the following paragraphs from The Cincinnati Post:

"The fact is that doctors' bills and the high cost of rooms in hospitals are forcing more and more self-respecting people to seek free medical service. They are not poor, but they cannot afford to pay the high price of getting well.

"Every man is entitled to medical service as good as that which his richer neighbor gets. When good medical service goes beyond the reach of many it becomes the duty of the state to provide it free or at a nominal cost for the self-respecting.

"A popular medical institution today is the Pay-Health Clinic, which charges \$5 for a complete physical examination, including X-ray. This is patronized not by the very poor, but by the so-called middle class that cannot afford doctors' fees ranging from \$25 to \$50 for an examination.

"If doctors' bills continue to be high the establishment of more such clinics, not only for examination, but also for treatment, will become absolutely necessary for the public welfare."

It is this sort of reading matter in the lay press that promotes popular discontent where there is little real ground for it.

EDITORIAL NOTES

The Wayne County Medical Society Bulletin is an interesting publication which is eagerly looked forward to each week by the majority of the members of the society. For the past few years the editorship has alternated between Dr. W. S. Reveno and Dr. Charles E. Dutches. Both are men of editorial ability and it is

difficult to judge which has made the greater success of the Bulletin. It comprises at present thirty-two pages of reading matter and advertisements. For a number of years it has been self-supporting. After a year's rest Dr. Dutchess is in the sanctum.

Every once in awhile members of the medical profession are solicited for written opinions on some product or other. A few months ago it was cigarettes; later it was for an opinion on the therapeutic properties of yeast. The testimonial is not sought gratuitously, the remuneration being a box containing a dozen packages of cigarettes or a bottle of perfume. Of course thoughtful physicians will think twice before they sell their professional birthright for the proverbial mess of pottage. The object is commercial exploitation under the aegis of the doctor's professional approval.

With the multiplication of automobiles on the city streets and rural highways, the problem of personal safety is assuming grave proportions. The driving of an automobile requires a clear head. Often serious accidents result from driving while tired or at night when the driver is in a somnolent condition. More often accidents are caused by drivers in a state of intoxication. Sometimes when such cases come to court the result hinges on the definition of what constitutes drunkenness. It was once told of a witness that he denied that the defendant was drunk because he saw him "move his little finger." However, the best view of the situation appears to be that of a magistrate who declared that the question is not that of discovering a definition of drunkenness, but of deciding whether the skill and judgment normally required in the management of a motor car may have been diminished or impaired as a direct result of the consumption of alcohol.

The Journal is indebted to Mr. J. W. Drummond of Detroit for the following note referring to the poem which appeared in the August number under the heading, "Lines on a Skeleton." A reward of two hundred and fifty dollars, offered more than three-quarters of a century ago, for the discovery of the identity of the author of "Lines on a Skeleton" was as unsuccessful in attaining its object as had been the search made by the literary world of Great Britain, and it now seems scarcely likely

that the person who wrote this remarkable poem will ever be known as its author. The story of the finding of the manuscript is to the effect that in the year 1820 an attendant in the Museum of the Royal College of Physicians and Surgeons in London, came upon a couple of sheets of paper lying near a human skeleton. Glancing at the sheets, he saw they contained verses. The ink with which they had been written was scarcely dry, and the idea occurred to the finder that they might have been penned by some official of the institution. Accordingly he took the sheets to one of his superiors, and in the course of the next few days the manuscript passed through the hands of several well known medical men who were wont to visit the college. One of these gentlemen copied the verses and sent them to the MORNING CHRONICLE, which promptly printed them. The poem made a marked impression on the public mind, and earnest efforts were made by several prominent literary people to discover the identity of the author.

THE JOY OF BEING THE EDITOR

Getting out this magazine is no picnic.
If we print jokes, people say we are silly.
If we don't, they say we are too serious.
If we clip things from other magazines,
We are too lazy to write them ourselves.
If we don't we are stuck on our own stuff.
If we stick close to the job all day,
We ought to be out hunting up news.
If we do get out and try to hustle,
We ought to be on the job in the office.
If we don't print contributions,
We don't appreciate true genius.
And if we do print them,
The magazine is filled with junk.
If we make a change in the other fellow's write-up,
We are too critical.
If we don't, we are asleep.
Now, like as not, some guy will say
We swiped this from some other magazine.
WE DID*

*So did we. Our swipe was from *The Fulton County Medical Bulletin*.

* We did too. We clipped it, from California and Western Medicine.

MEDICAL ETIQUETTE

"I say, without the slightest fear that I may be overstating my case, that there is no profession which is more exposed to the temptation to forget honor, humanity, and kindness than the medical profession, and none in which the exploitation of human suffering is easier. Yet there is none in which the temptation is so triumphantly withstood. Let this be remembered by the public when they feel inclined to sneer at medical etiquette and to speak of it as if it were a code for maintaining selfishness and enrichment. Medical etiquette is the salvation of the patient. It is the one thing which stands between him and the dangers of

exploitation. It is what makes him his sufferings hold the dominant part in the dread dramas of pathology."—John St. Loe Strachey, *The River of Life*.

THE (BORIC) ACID TEST

Auntie's down with para-typhoid, Uncle suffers from ptomaines,
And the doctor looks suspicious and inquires about the drains;
Two policemen died last Friday and the driver of a tram—
There's a rumour it was measles, but the sergeant says it's ham.

*O refrain from vain conjectures
And from rumours born in stealth,
And remember all the lectures
From the Department of Health!
Keep your minds at ease and placid,
For the inquest showed at least
Not a trace of boric acid
In the corpse of the deceased.*

If this morning's milk has curdled, and the cream has turned to cheese,
It's proof that no preservation has entered into these;
If the fish is phosphorescent and the beef is turning blue
You can tell they've not been doctored with some now forbidden brew.

*So if botulism briefly
Brings about your swift release
Let your final thoughts be chiefly
Those of gratitude and peace.
Let not vain regrets detain you—
If you'd struggle on alive
Boric acid might have slain you
At the age of ninety-five.*

—The Manchester Guardian.

THE PHYSICIAN'S ENGLISH

(The Atlantic Medical Journal)

All physicians write papers, but not more than one per cent have taken the trouble to learn how to do it properly—in fact, this figure is probably too high. The *New York Times* recently published a few words on the subject of professional English which are quite apropos of this remark. For example: A Yale professor who had been examining theses for the degree of doctor of philosophy confessed that "few of them were really comprehensible and all of them were totally devoid of the interest competent presentation can give to almost any subject." And again: "The truth is that in schools and colleges, and more particularly in those divisions where there is specialization in fields outside of literature, too little is done to facilitate the teaching of English." To this we would add a fervent "amen!" The physician who wants to write a paper should first assure himself that he has something worth writing about. He should then analyze the subject and classify his thoughts. He should expect to rewrite the paper from two to four times unless he has unusual experience in writing. He should condense it to the limit of clearness. He should scan it carefully for incomplete sentences, ambiguous phrases, incorrect spelling, grammar, and punctuation. He should be sure that his

paragraphing is good. (We have seen papers without a single paragraph indention throughout, and we have seen papers in which every sentence is paragraphed.) Finally, he should correct the finished product in ink, and let no typographical error escape. If he has additions to make, the page should be retyped. He should not expect either the editor or the printer to guess at his chirography. The sure test of a well written paper is this: Could an intelligent layman, provided with a good dictionary, comprehend its meaning? If not, it needs to be rewritten.

THE AMERICAN COLLEGE OF SURGEONS

(Boston Meeting)

The American College of Surgeons will hold the eighteenth Clinical Congress in Boston, October 8-12. Headquarters will be at the Statler hotel and meetings will be held in the ballroom of the Copley-Plaza hotel and Symphony hall. The Hospital Standardization Conference will be held in morning and afternoon sessions in the ballroom of the Copley-Plaza hotel Monday, Tuesday, Wednesday and Thursday. An innovation this year will be the commencement of the clinics in the Boston hospitals on Monday afternoon, continuing through the mornings and afternoons of the following four days. Monday evening's program will include an address of welcome by the local chairman, the address of the retiring president, Dr. George David Stewart, New York, the inaugural address of the president, Dr. Franklin H. Martin, Chicago, and the John B. Murphy oration on surgery by Professor Vittorio Putti of Bologna, Italy. Tuesday, Wednesday and Thursday evenings' sessions will be held in the ballroom of the Copley-Plaza hotel. At the Wednesday evening meeting the visiting surgeons will be the guests of the Boston Surgical Society at a special meeting when the Bigelow medal is to be awarded. On Friday evening the annual convocation of the college will be held in Symphony hall when the 1928 class of candidates for Fellowship in the college will be received. The fellowship address on this evening will be delivered by Dr. William J. Mayo. The annual meeting of the Governors and Fellows will be held Friday afternoon and will be followed by a symposium on traumatic surgery to be participated in by leaders in industry, labor, indemnity organizations and the medical profession. Either day will be celebrated in the Dome Room of the Massachusetts General hospital on Friday when a bronze bust of William T. A. Morton will be presented to the hospital. It was in this building that ether was first administered for the production of surgical anaesthesia on October 16, 1846. Several newly completed medical motion pictures produced under the supervision of the American College of Surgeons and approved by it will be shown during the congress. Reduced fares on the railways of the United States and Canada have been authorized to those holding a convention certificate so that the total fare for the round trip will be one and one-half the ordinary first class one-way fare. Other outstanding features will be the exhibits. In addition to the commercial exhibits the departments of the college will present scientific exhibits. A number of distinguished foreign guests of international reputation have signified their intention of attending. The chairman of the Boston Committee on Arrangements is Dr. Frederic J. Cotton.

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Our sympathy is tendered to Dr. A. M. Barrett of Ann Arbor in the death of Mrs. Barrett on September 14th.

Dr. George Van Amber Brown of Detroit has been elected president of the American Association of Gynecologists and Abdominal Surgeons, at the annual meeting of that organization held recently in Toronto.

The Ottawa County members held their annual golf match at the Holland Golf club on September 12th. Dr. W. Westrate was the director. Dr. Tappan of Holland carried off the honors winning the low total of 91. A dinner at the club followed the event.

The Kent County annual golf match was held at the Kent Country Club, Grand Rapids on September 12th, and was followed by a dinner. The enthusiasm exhibited initiated a movement to hold monthly matches during the 1929 season.

Meeting of the Ann Arbor Surgeons was called to order by Chief Surgeon, A. M. Hume, August 25, 1928 at 10 A. M. on board Wabash Car Ferry going to Menominee. Some eighteen surgeons were present.

Dr. A. M. Hume reviewed the history of the organization and spoke of the value which the R. R. company placed upon the co-operation of its company surgeons, and they were willing to co-operate in making these meetings a success, as far as possible.

Dr. Hume then took up care and treatment of injured, laying stress upon the fact that the injured were to be first in the minds of company surgeons, always using the best at their disposal for a speedy recovery.

Copies of instructions to surgeons were distributed to each member after which same was discussed and many good questions were asked. Instructions were also given regarding passengers. Letter from Mr. Sibo was read and carried a full discussion. Meeting adjourned until after lunch.

At Menominee we were allowed to have one and one-half hours to go ashore. Dr. Walker, company surgeon of Menominee, had busses waiting and the wives and other members of the surgeon's family, as well as the surgeons, were shown about the two cities of Menominee and Merrivell. A very pleasant trip, and many things of interest were to be seen.

Afternoon meeting was called to order at 4 P. M. Dr. Hume explained new emergency kit, which is now on passenger and freight trains and at division points. Dr. Snider of Toledo gave a very interesting talk on foreign bodies in the eye. Many questions asked and this was truly a wonderful resume of what each surgeon should know regarding care of so vital an organ.

Dr. DuBois of Alma gave a very fine paper on Blood Pressure in R. R. employees. Discussion and questions were many. Dr. McKenzie of Frankfort reviewed industrial skin disease, em-

patigo and Vincent's Angina being ones most common.

After dinner all were given a treat by a motion picture put on by Dr. Harold Hume, subject being infections of the hand, a very interesting and instructive picture. The evening closed with cards and dancing, and was one of the best meetings we have had for some years.

OTTO L. RICKER, M.D., Secretary,
Cadillac, Michigan.

A. M. Hume, M.D., Pres.,
Owosso, Michigan.

ENTERS PRIVATE PRACTICE

Dr. John R. Ernst, psychiatrist staff of Henry Ford hospital during the last three years, announces the opening of offices in suite 462 Fisher building, Grand boulevard at Second, Detroit. Dr. Ernst served as captain in the Neuropsychiatric Division of the Medical Corps during the World War and as psychiatrist, Central Board of Appeals, United States Veteran's bureau, Washington, D. C., prior to coming to Detroit.

THE HIGHLAND PARK PHYSICIANS CLUB

The Highland Park Physician's Club will be addressed by Dr. Robert I. Harris of Toronto, on Thursday, October 4, 1928, at 8:30 p. m. at the Highland Park General Hospital. The members of the Michigan State Medical Society are invited to attend. Subject: "Tuberculosis Bacilluria—Its Incidence and Significance in Surgical Tuberculosis." The third annual clinic of the Highland Park Physicians' club will be held Thursday, Nov. 1, 1928, at the Highland Park general hospital from 9 a. m. to 10:30 p. m. The tentative program is as follows: Dr. Henry J. Gerstenberge, Professor Pediatrics, Western Reserve University. Subject: "The Use of the Cinema in Diagnosing the Cause of Convulsions in Children." Robert Livingston Dixon, M. D., Wahjamega, Mich. Subject: "Pre-Convulsive Stage of Epilepsy." Carl Dudley Camp, M. D., Ann Arbor, Mich., Professor of Neurology, University of Michigan. Subject: "Psychoneurosis."

Clarence Leslie Starr, M. D., Professor of Surgery, Toronto University. Subject: "Orthopedics."

James Aitken Harrar, M. D., F. A. C. S. Subject: "Contracted Pelvis."

Theodore Rogers Waugh, M. D., Royal Victoria hospital. Assistant Professor Pathology, University of Montreal. Subject: "Pathology of Pernicious Anemia."

John R. Fraser, M. D., F. A. C. S., Montreal. Subject: "Pelvic Inflammations."

A detailed program will be sent each member of the Michigan State Medical Society as soon as they are printed. Luncheon will be served by the Highland Park General Hospital. Dinner from 6 to 8 p. m.

For further information concerning this clinic, or for reservations at the dinner, write Dr. Chas. J. Barone, Secretary, Highland Park Physicians' club, 26 Waverly, Detroit, Mich.

MEDICO-SOCIAL AND ECONOMIC

WHY WRITE?

Physicians are said to belong to the great silent, the inarticulate profession, and yet perhaps there is no other calling that has a more voluminous literature. Much of the written work of physicians is of a general nature and will live as literature. Among this may be mentioned the *Religio Medici* by Thomas Browne, the writings of Osler, of Keats, of Oliver Goldsmith, of Locke the Philosopher, of Conan Doyle, of Oliver Wendell Holmes, of Weir Mitchell and many others.

Bacon has said writing maketh an exact man. No other practice trains one in clear thinking to the same degree as writing. Good writing is as much an art as good painting or good sculpture. Addisonian prose or Gray's *Elegy* are as much works of Art as a Beethoven Symphony or Da Vinci masterpiece. Clear diction comes from a careful study of words, with close attention to the finer shades of meaning. It is peculiar that scientific men who are accustomed to working to the thousandth of an inch or reckoning in milligrams, are so careless as to the accurate meaning of words. Says Sir Clifford Allbutt, "The sifting of language is the weighing of thought. In scientific prose, words should be used as carefully as symbols in mathematics there are no true synonyms in literature, words have not only their stem meanings but carry upon them also many changes and tinctures of past uses which blend inevitably in our sentences." A recent edition of a good standard English Dictionary is indispensable and should be a constant desk companion.

"True ease in writing comes from art not chance, As those move easiest who have learned to dance."

EASY WRITING, HARD PRACTICE

Mediocre medical writing is due in large part to insufficient pains. The best literature is revised and rewritten many times. The poet Gray took eight years to write "The *Elegy in a Country Churchyard*." Easy writing and interesting style always imply hard practice. The impression of unstudied ease is the product of the greatest effort. Language and thought are so inseparable that someone has called language the flesh garment of thought.

An important preliminary to writing is what I call thought gathering, which means having within reach a notebook and pencil. These tools of the craft one should always carry with him because the mind has a peculiar way of working when apparently off duty. Unless we capture the thought when it surges into consciousness it is apt to vanish and as an unsubstantial pageant fade, leave not a trace behind. Graham Wallas in his delightful book, "The Art of Thought," uses the expression "Fringe Thoughts" to designate the ideas more or less germane to the subject which come up from the subconscious when a paper, medical or other, is undergoing parturition. Once the title is chosen every thought or idea bearing on it should be noted in such a way that when the rough draft of the paper is made the ideas may be collected and assembled in logical order. Having written the paper out in full,

preferably with pencil, put it away for at least a day or so, then read it over to see if one has expressed himself as intended. I may say here that it is not advisable to dictate the first draft or any part of a paper. The process of dictation is apt to detract from one's effort in construction. If certain sentences are not clear, rewrite them on the reverse side of the paper, amplifying as much as necessary for the lucid expression of the idea in mind. Sometimes this may require the revision of whole paragraphs; sometimes the elimination of paragraphs or sentences which may seem trivial and therefore unnecessary. A weak sentence always detracts.

REVISE AND REWRITE

At this stage of revision the paper may be handed over to the stenographer. A convenient size paper is a sheet 8½ by 11, the ordinary business letter head. The matter should be typed double space with a margin of about 1½ inches, on the left side of the sheet. This is very important. Copy typed single space leaves no room for editing, besides it an abomination to the printer. A good revision should be made at some convenient time better if an interval of several days be allowed to intervene. Time to the writer is like distance to the artist who steps back to get a clearer view of the canvas on which he is working. Revision each time should include both the material as well as the mode of expression. After a week or so one returns again to the subject and manuscript with new critical as well as constructive interest. As an aid to revision one of the best is to read the paper or address aloud. The ear will often detect a verbal repetition or an awkward phrase which the eye might overlook.

The rules for punctuation are well known; yet the writer has a certain latitude in the use of punctuation marks. The less involved his style, the fewer punctuation marks are needed.

Short sentences are easily comprehended, yet too many simple sentences are apt to tire the reader. A diction in which short and long sentences are used in about equal proportion is perhaps the most pleasing so far as this feature of composition is concerned.

In scientific papers it is well to avoid the too frequent use of the first personal pronoun. Such composition should be in the third person.

HONEST CRITICISM

It is well if possible to have one's papers edited by a competent editor who will be honest in his criticisms. Faithful are the wounds of a friend. A real friend will point out one's literary shortcomings. I have seen books and papers which were spoiled because of mannerisms of the writer which should have been eliminated in the revision of the copy.

The title of our medical paper has been given due consideration; the body of the paper has been written and revised to our satisfaction; how should we conclude? A long scientific paper should be concluded with a well devised summary which calls for special care. A poor ending leaves

a bad impression. One's leave taking should be as gracious and impressive as the opening portion of the address.

STUDY GOOD MODELS

So much for form. It is important to study good models. The best English from every point of view is the King James translation of the Bible. Many masters of English prose style, from Bunyan to our own time, have derived their inspiration from that well of English undefiled. Many masters of prose might be mentioned, but we need not go outside our own profession for examples. Probably there is none greater than Osler, Sir Frederick Treves, Sir Clifford Allbutt or T. H. Huxley. There is a number of excellent American medical writers who might be mentioned who are of the present generation. Perhaps the feature that impresses itself on us most is the fact that their papers and books are always interesting and looked forward to with eagerness. Someone has said that the test of a good medical paper is the degree with which it appeals to an intelligent layman armed only by a medical dictionary.

WHY WRITE AT ALL?

But we often hear the question, Why write at all? That there is nothing to say that has not already been said; that most medical papers are a rehash of what has been written. Writing is a form of self-expression, as much as art or music or gardening or golf. Writing is constructive as reading is receptive. Writing is constructive; if it be one's very best, it is like the quality of mercy, it blesses him that writes as well as him that reads. As for originality, none of us can be strictly original. Emerson has well said: "There is no such thing as monopoly in ideas. Thought is the property of him who can entertain it; and of him who can adequately place it; a certain awkwardness marks the use of borrowed thoughts; but as soon as we have learned what to do with them they become our own. Thus all originality is relative."

—J. H. Dempster.

DEATHS

FREDERICK J. LARNED, M.D.

Suddenly seized with a cardiac angina while playing golf, Dr. F. J. Larned of Grand Rapids died on September 6, 1928, at the age of 52. For a number of years Dr. Larned had limited his work to pediatrics and was chief of that service on the Butterworth hospital staff.

DR. W. T. GARRETSON

Dr. W. T. Garretson who for the past nine years had been in charge of the eye, ear, nose and throat department of the Henry Ford hospital, Detroit, died very suddenly at his home 638 Collingwood avenue, Detroit, Mich., on the 17th of August. He had been apparently in good health up to the time of his death. Dr. Garretson was a graduate of the University of Iowa and had done post-graduate work at the University of Edinburgh, Scotland. He served during the war both with the British Expeditionary Forces, and later with the American Red Cross. His

coming to Detroit followed the close of the war. Dr. Garretson was unmarried.

DR. ANGUS P. SUTHERLAND

Dr. Angus P. Sutherland of Detroit, Mich., died Saturday September 9th at the age of thirty-nine years. The doctor was a graduate of the University of Michigan and had practised in Detroit since his graduation. His death was due to pneumonia contracted a week previous while visiting at a summer cottage near Alpena. He leaves a widow and two children. Dr. Sutherland was the son of Rev. and Mrs. D. I. Sutherland of Detroit.

DR. GEORGE P. MCNAUGHTON

Dr. George P. McNaughton of Detroit died August 21st at his summer home at Gladwin, Michigan, after an illness of only three hours. The doctor was forty-three years old. He graduated from Rush Medical college and served an internship of two years at the Cook County hospital, Chicago, after which he began practice at Sault Ste. Marie. He later practised at Standish, coming to Detroit ten years ago. During the past ten years Dr. McNaughton had been associated with Dr. Alexander Blain as chief of the Medical Department of the Jefferson Clinic. Dr. McNaughton was a member of the Wayne County Medical Society; the Michigan State Medical Society; and the A. M. A. as well as Fellow of the American College of Physicians. Eighteen years ago he married Miss Mabel Fuller of Sault Ste. Marie, who survives him. Other survivors are a daughter, Muriel Ann; two brothers, Dr. Walter McNaughton and Charles McNaughton, both of Milwaukee, and two sisters, the Misses Lillian and Alberta McNaughton of Milwaukee.

DR. REYNOLDS C. MAHANEY

Dr. Reynolds C. Mahaney, of Owosso, died after a short illness, on August 4th, and was buried on August 7th, in Oak Hill cemetery, Owosso.

Twenty-three physicians from Owosso and vicinity attended the funeral in a body. Dr. Mahaney had been Health Officer of Owosso for several years, and the offices at the city hall were closed for the funeral, and all city officers, the police force and as many firemen as could be spared, attended also.

Dr. Mahaney graduated from the University of Michigan in 1900, and has practiced in Owosso since that date. He was a member of the county, state and American medical associations, and at the time of his death was chairman of the permanent committee on Public Health of the state medical society.

The Shiawassee County Medical Society of which he was a member, passed the following resolutions:

Whereas, death has again invaded our ranks and deprived us of an honored member by the removal of our esteemed fellow-member, Dr. Reynolds C. Mahaney, therefore,

Be it resolved, that in the passing of Dr. Mahaney, our society has lost an earnest and valued member whom we shall greatly miss, and,

Resolved, that we tender to the bereaved family our deep and sincere sympathy and condolence in this their sad affliction. And may the assuaging influence of time and loving memories gently soothe their sorrow. Further,

Resolved, that a copy of these resolutions be spread upon the minutes of our society, a copy

be furnished to the bereaved family, and a copy sent to the Journal of the State Medical Society for publication.

Committee.

ALBERT E. BULSON

Albert E. Bulson was born in the state of New York August 19, 1847. His father died when he was eight years old, the mother marrying again. While still a small boy the family moved to northern Indiana. When the Civil War began he was still under fourteen years of age, but he made strenuous efforts to enlist as a soldier, but was of course rejected on account of his size and age, although he lied patriotically as to his age. Finally on one occasion he stowed himself surreptitiously on a train carrying a load of volunteers to Cincinnati. The boys all wanted him and the colonel exerted his ingenuity to find a way. Finally on orders some one bought a second hand fife and getting the boy to practice at odd hours in lonely places he was enlisted as a fifer in the first call for troops while still thirteen years old.

He was in the army of the Potomac, in every battle from first Bull Run to Appomattox. He was honorably discharged July 5, 1865 as chief musician of the regiment.

At an early age he married Miss Sarah Abbott of Lawton, Mich., and graduated in medicine at the Chicago Medical College in 1868. He began practice at Gobleville, Van Buren County, Mich., practicing some years. His wife dying, he later married Miss Florence I. Breck in 1878. He later removed to Broadhead, Wisconsin, having at the time an older brother practicing at Janesville, in the same state. During this time he had taken also a general course at Bellone Medical College, N. Y. After practicing for some time in Broadhead he took a long special course on eye, ear, nose and throat in New York and in 1888 began practice as a specialist in these branches in Jackson, Mich., which he continued successfully to the day before his death, September 3, 1928, after passing by a little more than two weeks his 81st birthday. He was a fine man physically and mentally. Up to the time of his death his mind showed scarcely any signs of his advanced age. He was always a man's man, and from the time of his residence in Jackson was an enthusiastic member of the Michigan State Medical Society and of the local Society. He was high in Masonic and G. A. R. circles. He had the most prominent part in organizing the Jackson County Medical Society, the Jackson Academy of Medicine having expired some years before. He was the president of the new Society for the first two years, 1901 to 1903. He was president of the State Medical Society, and for many years Councillor for the district in which Jackson County is situated.

His second wife died in 1923. In 1925 he married Mrs. Bertha Blair, who survives him. By his first marriage he is survived by Dr. A. E. Bulson, Jr., of Ft. Wayne, Ind. By the second marriage by Mrs. Edwin A. Hooper, of Chicago; Dr. Glenn A. Bulson, Ft. Bayard, N. M., and Mrs. A. B. De La Vergne of Denver, Colo.

Dr. Bulson was a member of the Council for many years, following the re-organization of the Society in 1901. On relinquishing his office as Councillor he was elected to the office of President.

A life rich in years, service and friends was his. He rightly maintained an un-assailable place among outstanding men. He was of a character

that exerted a wholesome, inspiring influence upon all fellow-men. As a profession we are vastly richer, due to his contributions and service. We revere his memory and jealously prize all that his life bequeathed.

THE TOBACCO TEST

The vast increase in cigaret smoking at the expense of pipe tobacco and cigars, will probably make the pipe-smokers a little more sulkily superior than ever. They have always been a little "pipe-conscious," so to speak, and rather uneasily anxious to explain that smoking a pipe is a job for a he-man, while the cigaret is an effeminate toy. Now that the pipe is proved by statistics to be steadily losing ground its smokers will presumably grow more gruffly masculine than before, fuming with equal parts of annoyance and thick twist as they grunt out "No, thanks—always smoke a pipe. Don't call a cigaret a smoke at all."

At the same time the auld reekies have always been in a bit of dilemma. On the one hand they want to claim that the cigaret is "pernicious" and pipe-smoking healthful; on the other they desire to prove that cigaret smoking is only trifling with tobacco, whereas it needs a great, big, virile sort of man (preferably whiskered) to deal with a rich and reeking pipe. The two ideas don't run very well together. If pipe-smoking is the healthiest way of consuming tobacco, then it ought to be recommended for invalids, while the fatal and insidious cigaret should be left to the dare-devils who don't care a puff of smoke what happens to their liver, lights, lungs, and larynx. It is, in short, the pipe-smoker who sits in a corner and mutters "Safety first" while the reckless consumer of "coffin-nails" is gaily ruining his constitution.—Manchester Guardian.

"DENICOTINIZED" TOBACCO DECLARED A FRAUD

"Denicotinized" or "denicotined" tobacco, which has recently appeared on the market in the form of cigarets, cigars and smoking tobaccos, is little more than a fraud, according to a report of experiments made by chemists of the Connecticut Agricultural Experiment Station. Samples of these "denicotinized" brands showed, on analysis, 72 per cent of the amount of nicotine contained in the average unprocessed brands. Some of the popular brands of cigarets and smoking tobaccos actually contained less nicotine than some of the processed brands. Nine kinds of widely advertised and well known cigarets, three kinds of cigars and four kinds of smoking tobacco were examined and compared with the alleged "denicotinized" brands. The term "denicotinized" or "denicotined" is naturally taken to mean practically free from nicotine, whereas in the brands sold under that description, the cigarets contained from 2.32 to 0.94 per cent of nicotine. The popular unprocessed cigarets examined showed from 1.28 to 2.89 per cent. Unprocessed cigars ranged from 1.16 to 1.90 per cent, the "denicotined" from 0.67 to 1.07 per cent. Smoking tobaccos unprocessed, contained from 1.45 to 2.09 per cent, the "denicotinized" from 0.97 to 2.26 per cent. Obviously it is better to buy the standard unprocessed brands which are known to have a low nicotine content, especially as the purchaser will then have no false sense of security to lull him into the consumption of a greater amount of tobacco, recommends the report.—Science Service.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EDITOR: Frederick C. Warnshuis, M. D.

Secretary Michigan State Medical Society

POST-GRADUATE CLINICS

The Michigan State Medical Society and the Post-Graduate Department in Medicine of the University jointly announce the following programs for the Flint, Jackson and Grand Rapids Post-Graduate Clinics. Our members are urged to note the features of each program, and to plan to attend either all of them or at least the one of nearest location. There is presented in these programs excellent opportunity to obtain much that will be of profit. They are a part of your membership benefits.

MICHIGAN STATE MEDICAL SOCIETY AND THE

DEPARTMENT OF POST-GRADUATE MEDICINE, UNIVERSITY of MICHIGAN POST-GRADUATE CONFERENCE

Grand Rapids, Michigan, October 23-24, 1928

October 23, 1928 Program

BLODGETT MEMORIAL HOSPITAL

T. C. Irwin, M. D., Presiding.

Operative Clinic—One hour each morning between 8 and 9, in which Surgical Staff members will participate.

9:30-9:50 A. M.—Arterial Hypertension.
William Northrup, M. D.

10:00-10:20 A. M.—Breast Tumors.

Richard R. Smith, M. D.

10:20-10:40 A. M.—Toxemias of Pregnancy.

Athol B. Thompson, M. D.

10:50-11:10 A. M.—Chest Surgery.

William R. Torgerson, M. D.

11:10-11:30 A. M.—X-ray and Radium in Gynecology.

Paul W. Willits, M. D.

11:30-11:50 A. M.—Management of the Diabetic Patient with Complications.
Merrill Wells, M. D.

BUTTERWORTH HOSPITAL

R. F. Webb, M. D., Presiding.

Operative Clinic—One hour each morning between 8 and 9 by members of the Surgical Staff.

9:30-9:50 A. M.—Pyosalpingitis.
G. H. Southwick, M. D.

10:00-10:20 A. M.—Chronic Appendicitis.

W. E. Wilson, M. D.

10:20-10:40 A. M.—Acute Abdominal Lesions.

R. F. Webb, M. D.

10:50-11:10 A. M.—Fractures of Long Bones.

J. D. Vyn, M. D.

11:10-11:30 A. M.—Fractures of Skull.

F. C. Warnshuis, M. D.

ST. MARY'S HOSPITAL

William R. Vis, M. D., Presiding.

Operative Clinic—One hour each morning between 8 and 9 by members of the Surgical Staff.

9:30-10:15 A. M.—Fractures and X-ray Demonstration.

William H. Veenboer, M. D.

William A. Hyland, M. D.

W. D. Lyman, M. D.

V. M. Moore, M. D.

Louis Chamberlain, M. D.

10:40-11:00 A. M.—Pulmonary Tuberculosis.
William R. Vis, M. D.

11:00-11:20 A. M.—Empyema.
William H. Veenboer, M. D.

11:35-11:50 A. M.—Aortic Valvular Disease.
Dale Van Duzen, M. D.

11:50-12:10 P. M.—Pericardial Effusion.
John M. Whalen, M. D.

Complimentary luncheon will be served at Blodgett, Butterworth and St. Mary's Hospitals to all visiting physicians at conclusion of each morning program.

AFTERNOON SESSION

PANTLIND HOTEL BALL ROOM

Opening Statements—B. R. Corbus, Councillor.

1:30 P. M.—Various Types of Tachycardia and their Management.

M. A. Mortensen, M. D., Battle Creek.

2:00 P. M.—A Practical Method of Examination of Patients with Intestinal Stasis.
Frank Smithies, M. D., Chicago.

2:30 P. M.—Urological.
B. C. Corbus, M. D., Chicago.

3:00 P. M.—Surgery in Trauma.
Harry E. Mock, M. D., Chicago.

3:30 P. M.—Gastrorrhagia.
Frank Smithies, M. D., Chicago.

4:00-5:00—Moving Pictures—

1. Forceps Delivery with Episiotomy and Repair.

2. Treatment of Asphyxia Neonatorum.

J. P. Greenhill, M. D., Chicago.
Dr. De Lee's Clinic.

6:00 P. M.—Subscription Dinner.
B. R. Corbus, Presiding.

7:30 P. M.—Statement—H. S. Collisi, President Kent County Medical Society.

7:45 P. M.—Organizational Achievements.
F. C. Warnshuis, M. D.

8:15 P. M.—Post-Graduate Opportunities.
J. D. Bruce, M. D., Ann Arbor.

8:45 P. M.—Doctors, Patients and the Community.

M. L. Harris, M. D., Chicago.
President-Elect American Medical Association.

October 24, 1928 Program

BLODGETT HOSPITAL

- 9:30- 9:50 A. M.—Pernicious Anemia.
J. B. Whinery, M. D.
- 10:00-10:20 A. M.—Observations on
Pre-natal Care.
E. B. Anderson, M. D.
- 10:30-10:50 A. M.—Some Phases in the Study of
Sterility.
A. M. Campbell, M. D.
- 11:00-11:20 A. M.—Discussion of Some of the
Unusual Goitre Problems.
H. J. Vanden Berg, M. D.
- 11:30-11:50 A. M.—Surgery of Malignancies of
Face and Lips.
Ferris Smith, M. D.

BUTTERWORTH HOSPITAL

- 9:30- 9:45 A. M.—Diseases of Prostate.
L. M. McKinlay, M. D.
- 9:45-10:00 A. M.—Diseases of Kidney.
N. S. Vann, M. D.
- 10:20-10:35 A. M.—Foreign Bodies in the Orbit.
J. R. Rogers, M. D.
- 10:35-10:55 A. M.—X-ray Studies in Obstetrics.
H. S. Collisi, M. D.
- 10:55-11:15 A. M.—Diagnosis of Diabetes.
B. R. Corbus, M. D.
- 11:15-11:30 A. M.—Diagnosis of Pyloric
Obstruction.
L. J. Schermerhorn, M. D.
- 11:45-12:05 P. M.—Post-Operative Pulmonary
Lesions.
A. J. Baker, M. D.

ST. MARY'S HOSPITAL

- 9:30- 9:40 A. M.—Fractures of the Hip.
O. H. Gillett, M. D.
- 9:40- 9:50 A. M.—Fractures of the Wrist.
J. J. Rooks, M. D.
- 9:50-10:00 A. M.—Fractures of the Zygoma.
R. H. Denham, M. D.
- 10:15-10:30 A. M.—Dislocations.
Torrance Reed, M. D.
- 10:30-10:45 A. M.—Complications of Tonsillec-
tomy—Lung Abscess.
D. R. Heetderks, M. D.
- 10:45-11:00 A. M.—Massive Lung Collapse.
V. M. Moore, M. D.
- 11:00-11:15 A. M.—Lipiodol in Diagnosis and
Treatment of Bronchiectasis.
Carl F. Snapp, M. D.
- 11:15-11:30 A. M.—Pleural Effusion.
William L. Bettison, M. D.
- 11:45-12:00 M. —Angina Pectoris and Coronary
Thrombosis.
J. W. Rigterink, M. D.

Complimentary luncheon will be served at Blodgett, Butterworth and St. Mary's Hospitals at the conclusion of each morning program.

AFTERNOON PROGRAM

PANTLIND HOTEL BALL ROOM

- 1:15 P. M.—Immunization of Scarlet Fever.
Guy L. Kiefer, M. D., Lansing.
- 1:45 P. M.—The Treatment of Cancer by Sur-
gery, Radium and X-ray, and
Electrocoagulation, and Practical
Application of Each.
T. E. Jones, M. D., Cleveland.
- 2:45 P. M.—Remarks on Psycho-analysis, and
Other Methods of Psychotherapy.
Carl D. Camp, M. D., Ann Arbor.
- 3:15 P. M.—Wilber E. Post, M. D., Chicago.

3:45 P. M.—Perforating Gastric or Duodenal
Ulcer.

T. E. Jones, M. D., Cleveland.

4:15 P. M.—Wilber E. Post, M. D.—Chicago.

MICHIGAN STATE MEDICAL SOCIETY

AND THE

DEPARTMENT OF POST-GRADUATE
MEDICINE, UNIVERSITY of MICHIGAN
POST-GRADUATE CONFERENCE

Flint, Michigan, October 24-25, 1928

October 24, 1928 Program

HURLEY HOSPITAL AUDITORIUM

MORNING SESSION

- 10:00 A. M.—Opening Statement.
Henry Cook, Councilor.
- 10:15 A. M.—Thyroidism, Surgical Indications in.
Leon Bogart, M. D., Flint.
- 10:45 A. M.—Controllable Spinal Anaesthesia—
with lantern slides.
Frank Kelly, M. D., Detroit.
- 11:15 A. M.—The Relationship of Proctology to
Focal Infection.
L. J. Hirschman, M. D., Detroit.
- 11:45 A. M.—Focal Infections.
J. G. Manwaring, M. D., Flint.

AFTERNOON SESSION

- 1:45 P. M.—J. M. Robb, M. D., Detroit.
- 2:15 P. M.—Practical Methods of Examination of
Patients.
Frank Smithies, M. D., Chicago.
- 2:45 P. M.—The Value of the Electro-
Cardiograph.
W. J. Wilson, Jr., M. D., Detroit.
- 3:15 P. M.—Fracture.
G. C. Penberthy, M. D., Detroit.
- 3:45 P. M.—Gastrorrhagia.
Frank Smithies, M. D., Chicago.
- 4:15 P. M.—The Causes and Differential Diag-
nosis of Paraplegia.
L. J. Pollock, M. D., Chicago.
- 5:00 to 5:45—Functional Nervous Diseases.
L. J. Pollock, Chicago.

October 25, 1928

MORNING SESSION

- 9:00 A. M.—Dale E. Kirk, Flint.
- 9:30 A. M.—George Curry, M. D., Flint.
- 10:00 A. M.—Gynecological Lesions Due to Child
Birth.
Richard R. Smith, M. D., Grand Rapids.
- 10:30 A. M.—The Analysis of the Gastric Content
as an Aid in Diagnosis.
Elmer L. Eggleston, M. D., Battle Creek.
- 11:00 A. M.—A. C. Furstenburg, M. D., Ann Arbor.
- 11:30 A. M.—Pyloric Stenosis in Infants.
Richard R. Smith, M. D., Grand Rapids.

AFTERNOON SESSION

- 1:30 P. M.—Vomiting in Pregnancy.
Max Burnell, M. D., Flint.
- 2:00 P. M.—Physiology of Constipation.
Walter C. Alvarez, M. D., Rochester.
- 3:00 P. M.—Spastic Colitis and Diverticulosis.
Elmer L. Eggleston, M. D., Battle Creek.
- 3:30 P. M.—Urology. Hugh Cabot, Ann Arbor.
- 4:00 P. M.—Acute Pancreatitis.
W. H. Marshall, M. D., Flint.
- 4:30 P. M.—Diagnostic Dry Clinic.
Reuben Peterson, M. D., Ann Arbor.

October 24, 1928

EVENING SESSION

7:30 P. M.—M. S. Chambers, M. D., Flint.

8:00 P. M.—Organized Medicine.

F. C. Warnshuis, M. D., Grand Rapids.

8:30 P. M.—Post-Graduate Opportunities.

J. D. Bruce, M. D., Ann Arbor.

9:00 P. M.—Doctors, Patients and the Community.

M. L. Harris, M. D., Chicago.

President-Elect American Medical Association.

MICHIGAN STATE MEDICAL SOCIETY

AND THE

DEPARTMENT OF POST-GRADUATE MEDICINE, UNIVERSITY of MICHIGAN POST-GRADUATE CONFERENCE

Jackson, Michigan, October 24, 1928

PROGRAM

9:30 A. M.—Common Rectal Conditions.

Edward G. Martin, M. D., Detroit.

10:00 A. M.—Correction of Deformities.

Alfred D. La Ferte, M. D., Detroit.

10:30 A. M.—Focal Infections.

Edward G. Martin, M. D., Detroit.

11:00 A. M.—Diagnosis of Glaucoma.

A. E. Bulson, M. D., Fort Wayne.

11:30 A. M.—Blood Examinations.

H. E. Cope, M. D.—Detroit.

12:15 P. M.—Luncheon.

1:30 P. M.—Arthritis.

Philip Kruscher, M. D., Chicago.

2:00 P. M.—Gynecology.

Channing W. Barrett, M. D., Chicago.

2:30 P. M.—Medicine. Capps, M. D., Chicago.

3:00 P. M.—Drainage of Accessory Sinuses.

A. E. Bulson, M. D., Fort Wayne.

3:30 P. M.—Gynecology.

Channing W. Barrett, M. D., Chicago.

4:00 P. M.—Bachache.

Philip Kruscher, M. D., Chicago.

4:30 P. M.—Medicine. Capps, M. D., Chicago.

DINNER

7:45 P. M.—

8:45 P. M.—

ANNUAL MEETING

The Journal went to press 'ere our annual meeting convened. Our members will find a full report and the official minutes in the November issue.

THE CRIPPLED CHILDREN QUESTION

Until the year 1918 there was very little being done in the way of organized work for crippled children. Reverend Lloyd Douglas, pastor of the Congregational church of Ann Arbor, together with the members of his congregation, had been assisting with the cripples receiving treatment at the University hospital. They felt the need of more supporters and appealed to the men in attendance at the District Convention of Rotary clubs. Rotary clubs have been staunch supporters of crippled children work since that date. Through their efforts, many children have been persuaded to submit to hospitalization and have come to bless the day when lay people band-

ed themselves together for the aid of cripples. The Rotarians interested in this problem is one of service to their fellowmen and to their communities.

Countless numbers of crippled children come from families who are ignorant of the modern methods of science and surgery and the benefits which may be derived therefrom. Doctors must sit in their offices and wait for business to present itself. Lay people can go out among the sick and suffering and induce them to apply for treatment after first convincing the families that assistance is within reach. This has been the program of Rotary clubs. Their members arrange for Crippled Children Clinics, bring the children in to the place of examination, visit the homes afterward and convey the children to surgeons or hospitals for treatment.

It is a Big Brother movement, it covers much more, even, than the hospitalization of cripples. It extends through the period of rehabilitation to the time when an individual is treated and trained to go to work. It provides a job for him either in the business establishment of the Rotarian, or through his influence, in some other suitable place.

Science and surgery can do much today for the physically handicapped but after the physical restoration, the responsibility of the medical profession ends. It still remains for the layman to provide employment for those not financially able to support themselves without such assistance.

Prominent Rotarians formed the *Michigan Society for Crippled Children*, a branch of the *International Society for Crippled Children*. Any person interested in the welfare of cripples may become a member of the society at an annual fee of one dollar per year.

The Michigan Society for Crippled Children was influential in having passed by the 1927 State Legislature, the Crippled Children Law, Act No. 236 of the Public Acts of 1927. This law is a big step in the right direction. No one considers it perfect, it was designated as an entering wedge for the purpose of studying the problem and making recommendations to meet the needs of cripples in the future.

The commission members are lay people. They endeavor to administer the law as it stands for the good of all concerned. First consideration is always given to the crippled children themselves, next in order come the personal and private rights of the families of cripples.

No family is forced to submit to the hospitalization of its crippled members, rather are they extended a course of education as to the possibilities of modern hospital treatment and its happy results. The rights of the people to seek advice from surgeons who specialize in crippled children treatment will always be conserved. The relationship between the patient and his family physician will not be interfered with. It is the policy of the commission to go into consultation with the patient, his family, and his family physician, in order to determine the best policy to pursue for the child. Members of the commission are:

Hugh Van de Walker, Chairman; Ypsilanti, Michigan.

Mrs. C. L. Barber, Lansing, Michigan.

Mrs. L. James Bulkley, Detroit, Michigan.

Vincent Giuliano, Detroit, Michigan.

Albert L. Miller, Battle Creek, Michigan.

The policies of the commission and the actual working out of various phases of the law will be treated in succeeding articles:

I. Organization and conducting of clinics.

- II. Hospitalization of cripples under the new law.
- III. Education of cripples.
- IV. The program of prevention.
- V. The future of the crippled children of Michigan.

REGULATION OF THE HEALING ART BY LAW

H. E. RANDALL, M. D.

The following compilation by Dr. H. E. Randall is most interesting. We are commending it to our readers.

Earliest Code—Code of Hammurabi, Babylonian 2200 B. C.

By the divine favor I am Hammurabi, the exalted King, the Worshiper of the Supreme Deity.

6. If a man has stolen property from the Bod or palace, that man shall be put to death.

22. If anyone has committed a robbery and is caught, he shall be killed.

195. If a son has struck his father, one shall cut off his hands.

200. If he knocks out the teeth of a man who is equal, his teeth one shall knock out.

202. If anyone has injured the strength of a man who is high above him he shall publicly be struck with sixty strokes of a cowhide whip.

204. If he injured the strength of a freedman one shall cut off his ear.

197. If one break the limb of a free born man, his limb one shall break.

215. If a doctor has treated a man for a severe wound with a lancet of bronze and has cured the man or has opened a tumor with a lancet of bronze and has cured the man's eye, he shall receive ten shekels of silver.

216. If he was a freedman he shall receive five shekels of silver.

217. If it was a man's slave, the owner of the slave shall give the doctor two shekels of silver.

220. If he has opened his tumor with a bronze lancet and has ruined his eye, he shall pay half of his price in money.

221. If a doctor has cured the broken limb of a man, or has healed his sick body the patient shall pay the doctor five shekels of silver (1.00).

218. If a physician has treated a free born for a severe wound with a lancet of bronze and has caused the man to die, or has opened a tumor of the man with a lancet of bronze and has destroyed his eye, his hands one shall cut off.

219. If a doctor has treated the slave of a freedman for a severe wound with a bronze lancet and has caused him to die, he shall give back slave for slave.

222. If it be a freedman he shall give three shekels of silver (60c).

226. If a barber surgeon without the consent of the owner of a slave has branded the slave with an indelible mark, one shall cut off the hands of that barber.

THE OATH

I swear by Apollo the physician, and Esculapius and Health, and Allheal, and all the gods and goddesses, that, according to my ability and judgment, I will keep this oath and this stipulation—to reckon him who taught me this art

equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart of knowledge of the art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous, I will give no deadly medicine to any one if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my art. I will not cut persons laboring under the stone, but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and, further from the seduction of females or males, of freemen and slaves. Whatever, in connection with it, I see or may hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated, may it be granted to me to enjoy life and practice of the art, respected by all men, in all times; but should I trespass and violate this oath, may the reverse be my lot!

Law of the Emperor Frederick 11. (1194-1250) regulating the practice of medicine.

"While we are bent on making regulations for the common weal of our loyal subjects we keep ever under our observation the health of the individual. In consideration of the serious damage and the irreparable suffering which may occur as a consequence of the inexperience of physicians, we decree that in future no one who claims the title of physician shall exercise the art of healing or dare to treat the ailing, except such as have beforehand in our University of Salerno passed a public examination under a regular teacher of medicine and been given a certificate, not only by the professor of medicine, but also by one of our civil officials, which declares his trustworthiness of character and sufficiency of knowledge. * * * Violation of this law is to be punished by confiscation of goods and a year in prison for all those who in future dare to practice medicine without such premission from our authority.

"Since the students cannot be expected to learn medical science unless they have previously been grounded in logs, we further decree that no one be permitted to take up the study of medical science without beforehand having devoted at least three full years to the study of logic. After three years devoted to these studies he (the student) may, if he will, proceed to the study of medicine, provided always that during the prescribed time he devotes himself also to surgery, which is a part of medicine * * * After having spent five years in study he shall not practice medicine until he has a full year devoted himself to medical practice with advice and under the direction of an experienced physician. * * * We also decree that no surgeon shall be allowed to practice, unless he has written certificate, which he must present to the professor in the medical faculty, stating that he has spent at least a year at that part of medicine which is necessary as a

guide to the practice of surgery, and that, above all, he has learned the anatomy of the human body at the medical school, and is fully equipped in this department of medicine, without which neither operation of any kind can be undertaken with success nor fractures be properly treated. * * * We also decree by the present law that no one in the kingdom except in Salerno or in Naples (in which were the two universities of the kingdom) shall undertake to give lectures on medicine or surgery, or presume to assume the name of teacher, unless he shall have been very thoroughly examined in the presence of a government official and of a professor in the art of medicine. * * * Every physician given a license to practice must take an oath that he shall faithfully fulfill all the requirements of the law, and in addition that whenever it comes to his knowledge that any apothecary has for sale drugs that are of less than normal strength, he shall report him to the court, and besides that he shall give his advice to the poor without asking for any compensation." * * * He (the regularly licensed physician) must not enter into any business relations with the apothecary nor must be taken any of them under his protection nor incur any money obligations in their regard. Nor must any licensed physician keep an apothecary's shop himself. * * * We decree also that the growers of plants meant for medical purpose shall be bound by a solemn oath that they shall prepare their medicines conscientiously according to the rules of their art, and so far as it is humanly possible that they shall prepare them in the presence of the inspectors. Violations of this law shall be punished by the confiscation of their movable goods. If the inspectors, however, to whose fidelity to duty the keeping of the regulations is committed should allow any fraud in the matters that are entrusted to them, they shall be condemned to punishment by death."

In Paris the divorce of medicine and surgery took place. Minor surgery was in the hands of barbers who performed minor operations, such as bleeding. The important operation by master surgery.

In 1506 the Paris Faculty took barber surgery under wing in order to spite the surgeon proper, of whom it was jealous and later the surgeon of long robe, having failed to become separate faculty, to make the best of the bad bargain by coming under sway of physicians.

Following the teachings of Avicenna, to the effect that surgery was an inferior branch of medicine.

In France an edict of Tours in 1163 specifically restricted surgery to barbers and mountebanks.

In England in 1745 act was passed making college of surgeons and corporation of barbers, separate bodies and limiting surgery to membership in colleges of surgeons, physicians and apothecaries.

The apothecaries of early 17th century were still combined with the grocers. The Faculty of Medicine the right to practice medicine, pharmacy, and surgery. The assistants and apprentices of these medical men were called apothecaries and they performed minor surgical and medical duties, compounded their masters' prescriptions, and prepared the stock supplies of medicine, "Grocers", says King James, "are merchants" the business of the apothecary is a mystery.

At common law the medical practitioner had no remedy at law to recover remuneration for his services. He could only expect an Honorary reward. This rule was never in force in the United

States. In territorial days of Michigan the power of granting and revoking license to practice medicine was held by the Michigan Medical Society organized in 1819.

Supreme Court of the United States.

Dent vs. West Virginia. Decided March 15, 1882.

The Defendant—since the year 1876 continuously to the present time, and has during all said time enjoyed a lucrative practice, publicly, professing to be a physician, prescribing for the sick, and appending to his name the letters M. D.—that he has no certificate, as required by section 9, chapter 93, Acts of the Legislature of West Virginia, passed March 15, 1882, but has a diploma from the "American Medical Eclectic College of Cincinnati."

Dent on the ground that the Act of the Legislature was unconstitutional and void so far as it interfered with his vested right in relation to the practice of medicine.

The Unconstitutionality assenter consists in its alleged conflict with the clause of the Fourteenth Amendment, which declares that no state shall deprive any person of life, liberty or property without due process of law—the denial to the defendant of the right to practice his profession without the certificate required constituting the deprivation of his vested right, and estate in his profession, which he had previously acquired. The nature and extent of the qualifications required must depend primarily upon the judgment of the state as to their necessity. If they are appropriate to the calling or profession, and attainable by reasonable study or application, no objection to their validity can be raised because of their stringency or difficulty. Due consideration therefore, for the protection of society may well induce the state to exclude from practice those who have not such a license, or who are found upon examination not to be fully qualified. We perceive nothing in the statute which indicates an intention of the Legislature to deprive one of any of his rights. No one has a right to practice medicine without having the necessary qualifications of learning and skill; and the statute only requires that whoever assumes, by offering to the community his services as a physician, that he possesses such learning and skill, shall present evidence of it by a certificate or license from a body designated by the state as competent to judge of his qualifications. Judgment affirmed.

Supreme Court of the United States.

Hawker vs. People of the State of New York. Decided April 18, 1898.

"The legislature of a state may enact that one who had been convicted of crime shall no longer engage in the practice of medicine.

"Such legislation is not an additional punishment for past offenses or an *ex post facto* law, but prescribes the qualifications for the position and the appropriate evidence of such qualifications.

"Care for the public health is something confessedly belonging to the domain of that power. (police power). The physician is one whose relations to life and health are of the most intimate character. It is fitting, not merely that he should possess a knowledge of disease and their remedies, but also that he should be one who may safely be trusted to apply those remedies. Character is as important a qualification as knowledge, and if the legislature may properly require a definite course of instructions, or a certain examination as to learning, it may with

equal propriety prescribe what evidence of good character shall be furnished. These propositions have been often affirmed.

"The door stands open to all who possess the requisite age and good character, and can stand the examination which is exacted of all applicants alike.

"It is not open to doubt that the commission of crime, the violation of the penal laws of a state, has some relation to the question of character. It is not, as a rule, the good people who commit crime. When the legislature declares that whoever has violated the criminal laws of the state shall be seemed lacking in good moral character it is not laying down an arbitrary or fanciful rule."

Mr. Justice Harlan dissenting.

If the statute in force when the offense of abortion was committed had provided that in addition to imprisonment in the penitentiary, the accused, if convicted, should not thereafter practice medicine, no one, I take it, would doubt that such prohibition was a part of the punishment prescribed for the offense.

Supreme Court of the United States.

John A. Watson vs. State of Maryland. Decided May 31, 1910.

Constitutional law—due process of law—notice. A conviction for practicing medicine without registration, contrary to Md. Code 1904 art. 43 *99, is not wanting in due process of law because the accused was not given the notice required by *80 of that article to be sent to unregistered physicians, where he had a trial before a court and jury under Maryland statutes was proceeded against under the forms provided for by the laws of that state, and the section under which the conviction was has been construed by the highest court of the state completely to define the offense without resorting to the necessity of notifying unregistered physicians before they become liable to the penalties for practicing without registration, Constitutional law—equal protection of the laws—registration of physicians—classification—police power.

The exemption from the provisions of Md. Code 1904, art. 43, *83, for the registration of physicians, in favor of those physicians who were then practicing in the state, and had so practiced prior to January 1, 1898, and could prove by affidavit that within one year of said date they had treated at least twelve persons in their professional capacity, in not such an unreasonable and arbitrary classification as renders the statute invalid, as denying the equal protection of the laws, but is within the discretion vested in the legislation in exercising the police power.

The contention of the plaintiff in error is that there being no charge in the indictment, nor proof in the case, that he was furnished with this notice, his conviction was without due process of law.

It is well settled to require discussion at this day that the police power of the states extends to the regulation of certain trades and callings, particularly those which closely concern the public health. There is perhaps no profession more properly open to such regulation than that which embraces the practitioners of medicine. Dealing, as its followers do, with the lives and health of the people, and requiring for its successful practice general education and technical skill, as well as good character, it is obviously one of those vocations where the power of the state may be exerted to see that only properly qualified persons

shall undertake its responsible and difficult duties.

Supreme Court of the United States.

Ira W. Collins vs. State of Texas. Decided February 19, 1912.

The ruling of the state court that osteopaths are persons practicing medicine, within the meaning of Tex. Laws 1907, chap. 123 providing for licensing and registering medical practitioners, will be followed by the Federal Supreme Court in determining the constitutionality of such statute on writ of error to the state court.

United States Supreme Court.

Crance vs. Hiram Johnson 339—January 8, 1917.

On Appeal to review decree denying injunction to restrain enforcement of requiring drugless to pass examination. There were three class certificates; for physicians, drugless, and chiropody. It was claimed act discriminated in treatment by prayer, by faith, mental suggestion and mental adaptation, lying on of hands, anointment in the holy oil, and kindred treatment.

"The exemption in favor of persons treating the sick by prayer—does not render the status invalid as denying the equal protection of the laws guaranteed by U. S. Const. 14th Amed.

"The state's police power extends—that drugless practitioners employing faith, hope, and the processes of mental suggestion and mental adaptation in the treatment of disease, shall have completed a prescribed course of study and passed an examination.

"We cannot say that the state's estimate of the practices and of their differences is arbitrary, and therefore beyond the power of government. And this we should have to say to sustain the contentions of complaint, and say besides, possibly against the judgment of the judgment of the state, that there was not greater opportunity for deception in complainant's practice than in other forms of drugless healing."

Supreme Court of the United States.

Linder vs. United States of America. Decided April 13, 1925.

Food and drugs—liability under Harrison Act for administering drug to addict.

A physician cannot be prosecuted under the Harrison Narcotic Law, which is a pure revenue measure, for delivery to an addict, for self-administration, of four small tablets of morphine or cocaine, for relief of conditions incident to the addiction.

Petitioner,—a duly licensed and registered physician, without an official written order therefore, knowingly, wilfully, and unlawfully did sell, barter, and give to Ida Casey one tablet of morphine and three tablets of cocaine. He knew she was addicted to habitual use of these drugs and did not require administration of either because of any disease other than such addiction.

Obviously, direct control of medical practice in the states is beyond the power of the Federal government. Incidental regulation of such practice by congress through a taxing act cannot extend to matters plainly inappropriate and unnecessary to reasonable enforcement of a revenue measure.

The narcotic law is essentially a revenue measure, and its provisions must be reasonably, applied with the primary view of enforcing the special tax. We find no facts alleged in the indictment sufficient to show that petitioner had done anything falling within definite inhibitions

or sufficient materially to imperil orderly collection of revenue from sales. Federal power is delegated, and its prescribed limits must not be transcended even though the end seems desirable.

United States Supreme Court.

Reetz vs. Michigan. Decided February 23, 1903.

Reetz was practicing before Act of 1899 (237) and failed to register. Argued that act conferred judicial power to state board. Decision was the board in so acting did not exercise judicial power, as that phrase is commonly used.

"The ascertainment and determination of qualifications to practice medicine by a board of competent experts, appointed for that purpose is not the exercise of a power which appropriately belongs to the judicial department of the government."

Also "that any legal preceeding enforced by public authority, whether sanctioned by age and custom, or newly devised in the discretion of the legislative power, in furtherance of the general public good which regards and preserves these principles of liberty and justice, must be held to be due process of law.

"It is further insisted that having once engaged in the practice, and having been licensed so to do, he had a right to continue in such practice, and that this statute was in the nature of an ex post facto law. The case of Hawker vs. New York, 170 U. S., 189, 42 L. ed. 1002 18 Sup. Ct. Rep. 573, is decisive upon this question. The statute does not attempt to punish him for any past offense, and in the most extreme view can only be considered as requiring continuing evidence of his qualifications as physician or surgeon."

Missouri Ex. Rel. Hurtwitz vs. North.

Argued April 12, 1926.

Mr. Justice Stone delivered the opinion of the court. Plaintiff in error was a physician licensed to practice by the state board of health of Missouri. On complaint made to the board, and after notice and hearing, his license to practice was revoked on the ground that he had unlawfully produced an abortion.

2. Constitutional law—due process—requiring production of evidence by deposition.

Requiring a physician to produce his testimony by deposition to the exclusion of witnesses in person, in a proceeding to revoke his license, does not unconstitutionally deprive him of due process of law.

3. Appeal—effect of state decision. Upon writ of error to review a judgment of a state court, the Supreme Court of the United States is bound by the construction by the state court of a state statute.

Supreme Court of Wisconsin. April 3, 1923.

1. Physicians and surgeons—Chiropractor is required only to exercise skill of that school of treatment.

2. Physicians and surgeons—Chiropractors are required to exercise skill in diagnosis.

Section 14351 provides and makes them liable for malpractice. So far as here applicable, it reads:

"Any person practicing medicine, surgery, osteopathy, or any form of system of treating the afflicted without having a license or a certificate of registration authorizing him so to do, shall not be exempted from, but shall be liable to all the penalties and liabilities for malpractice;

and ignorance on the part of any such person shall not lessen such liability for failing to perform or for negligently or unskillfully performing or attempting to perform any duty assumed; and which is ordinarily performed by licensed medical or osteopathic physicians, or practitioners of any other form or system of treating the afflicted."

Osteopaths.

(6743) Sec. 4. The certificate provided for in section two of this act shall entitle the holder thereof to practice osteopathy in the state of Michigan in all of its branches as taught and practiced by the recognized colleges or schools of osteopathy, but it shall not authorize him to practice medicine within the meaning of act number two hundred thirty-seven of the Public Acts of eighteen hundred ninety-nine, or acts amendatory thereto: Provided, that nothing in this act shall be construed as to prohibit any legalized osteopathic physician in this state from practicing medicine and surgery after having passed satisfactory examination before the state board of medical examiners.

(6746) Sec. 7. This act shall not apply to any legally qualified medical practitioner practicing medicine and surgery, under act number two hundred thirty-seven of the Public Acts of eighteen hundred ninety-nine or acts amendatory thereto, nor shall this act apply to masseurs or nurses practicing massage or manual Swedish movements in this state.

Michigan Medical Act—Act 237, 1899.

3. The board is authorized to issue a license or certificate of registration to any person who desires to practice a system of treatment of human ailments or diseases, and who does not in such treatment use drugs or medicines, internally or externally, or who does not practice surgery or midwifery, under the provisions of this act: Provided, that the applicant for such license of certificate of registration shall have an accredited diploma from a high school, academy, college or university, or an equivalent credential, or shall pass an examination before the board of preliminary examinery, such examination to be equivalent to a recognized high school diploma, as provided in subdivision one of this section, and shall pass an examination before the board upon the following subjects: Anatomy, histology and embryology, physiology, chemistry, bacteriology, pathology, diagnosis, hygiene and public health.

A practitioner under subdivision shall not be permitted to use in any form the title of "doctor" or "professor" or any of their abbreviations or any other sign or appellation to his or her name which would in any way designate him or her as a physician or surgeon.

Employing or being employed by any capper, solicitor or drummer for the purpose of securing patients; or subsidizing any hotel or boarding house with a like purpose, or paying, or offering to any person, money or any other thing of value with a like purpose, or advertising to do so in any form whatsoever; or the division of fees in a consultation or a reference of a patient to a physician referring the case, without the knowledge of the patient or the persons concerned in the payment thereof.

Being guilty of offenses involving moral turpitude, habitual intemperance, or being habitually addicted to the use of morphine, opium, cocaine, or other drugs having a similar effect; or of prescribing or giving away any substance or com-

pound containing alcohol or drug for other than legal and legitimate therapeutic purposes.

The creation of such misdemeanor by this act shall not be construed to supersede any existing remedy or punishment, whether civil or criminal, for any act embraced within the provisions of this act, but shall be construed to be in addition thereto.

Definition of Practice of Medicine, "Practice of medicine shall mean the actual diagnosing, curing or relieving in any degree, or professing to attempting to diagnose, treat, cure or relieve any human disease, ailment, defect, or complaint, whether of physical or mental origin, by attendance or by advice, or by prescribing or furnishing any drug, medicine, appliance, manipulation or method, or by any therapeutic agent whatsoever.

(6737) Section 1. Any physician or surgeon engaged in the practice of medicine in this state, who shall employ any solicitor, capper, or drummer for the purpose of procuring patients or who shall subsidize any hotel or boarding house, or who shall pay or present to any person money or other valuable gift for bringing patients to him, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not more than two hundred dollars or by imprisonment in the county jail for a period not exceeding six months, or by both such fine and imprisonment in the discretion of the court.

Supreme Court of Michigan.

People vs. Lewis. Decided December 22, 1925.

It is within legislative power to require persons practicing treatment of human ailments or diseases without the use of drugs to possess knowledge of organic structure, intimate structure of tissues, embryonic evolution, functions of the body, molecular and atomic structure of bodies, micro-organisms, science of diseases, morbid processes observable in various diseases of organs, recognition of diseases by its symptoms, science of health, and efforts made and measures and precautions deemed advisable for the promotion and protection of public health.

The courts will not indict the medical profession of design to annihilate the system of chiropractic adjustment, and the legislature of supinely surrounding the lawmaking power in aid thereof, because of the passage of the medical practice act requiring chiropractors to pass an examination before a medical board in subjects which no school of chiropractic teaches, but knowledge of which the legislature deems necessary by persons practicing treatment of human ailments or diseases.

It may be that no chiropractic school teaches all the subjects mentioned and chiropractors feel that a knowledge thereof is unnecessary and unused in their school of practice, but this affords no reason for requiring the legislature, in recognition thereof, to enact no law not in conformity therewith.

No school may fix a standard of education, and thereby entitle its graduates to practice any branch of the healing arts, regardless of legislation accord, with only what he has been taught. The law recognizes chiropractic adjustments or treatments and fixes the standard of knowledge deemed essential to a proper practice thereof. The legislature took a comprehensive view of the public welfare in regulating the practice of medicine. This practice is well stated in our former decisions.

It is of no consequence that the defendant abstained from the use of the words "diagnosis",

"treatment," or "disease," in description of what he did, and employed the terms "analysis," "palpation" and "adjustment." The acts which he did and their manifest design are to be examined rather than the words used.

The court quoted for Johnson vs. Texas.

"In the interest of the public health and the general welfare of the people, the legislature is authorized to prescribe such regulations to be conformed to by persons seeking to enter the practice of medicine as in its judgment will secure, or tend to secure, the people against the consequences of ignorance and incapacity, as well as of deception and fraud, and this without regard to any special system of practice or any established school of medicine.

"In order that assurance may be had that the one who treats diseases has this requisite qualification, the state has the undoubted right to prescribe a general preparation to be made by one entering such profession, and also to prescribe that he shall have a knowledge of what the legislature may deem the necessary scientific branches of medicine of such profession.

"The Michigan medical practice act does not undertake to prescribe treatment or limit the practice of medicine to any school.

"The power of the state to prescribe such restrictions and regulations in the practice of medicine as, in the judgment of the legislature, shall protect the people from the consequences of ignorance or incapacity, as well as deception and fraud, has been vindicated too often to require citation of authority.

"What we have said is not in disparagement of drugless healing. We decide only the legal questions presented and leave the policy of the law, within legitimate limits, to the legislative power."

The Amended Medical Law of Indiana.

Effective May 17, 1927.

The attorney general, prosecuting attorney, the state board of medical registration and examination, or any citizen of any county where any person shall engage in the practice of medicine as herein defined, without having first obtained a license so to do, may, in accordance with the laws of the state of Indiana governing injunctions, maintain an action in the name of the state of Indiana to enjoin such person from engaging in the practice of medicine, as herein defined, until a license to practice medicine be secured.

And any person who has been so enjoined who shall violate such injunction shall be punished for contempt of court: Provided, that such injunction shall not relieve such persons so practicing medicine without a license from a criminal prosecution therefor as is now provided by law, but such remedy by injunction shall be in addition to any remedy now provided for the criminal prosecution of such offender. In the basic science examination, it is proposed to forbid appointment to board of anyone connected with school teaching, healing art. The examination is for applicants not less than twenty-one years of age, good character, accredited to high school, or equivalent, and examination in anatomy, physiology, chemistry, bacteriology, pathology, diagnosis, and hygiene.

GRATIOT-ISABELLA-CLARE COUNTY

The September meeting of the G. I. C. was held at the Park House, St. Louis, Thursday, September 6th. Twenty members and guests had supper together at 6:30, after which President

Barstow introduced Dr. John L. Chester of Detroit who read a paper on Rheumatic Heart disease. The doctor covered the subject very thoroughly, after which several members asked questions, which brought out interesting points in detail. One patient with Rheumatic Heart disease was shown for a clinic.

E. M. Highfield, Secretary.

NEWAYGO COUNTY

Regular meeting of the Newaygo County Medical Society met with Dr. and Mrs. W. H. Barnum at their cottage on Fremont lake, Thursday August 2, 1928, at 4:40 P. M.

The meeting was called to order by the president, Dr. H. R. Moore, and Dr. Wm. LeFevre of Muskegon was called and gave a very interesting talk on the different phases of diabetes, including symptoms, diet and treatment.

This being ladies' night the members and ladies then repaired to the dining room where a bounteous chicken dinner was served. Nine members were present.

Meeting was then adjourned.

W. H. Barnum, M.D., Secretary.

LIVINGSTON COUNTY

Meeting held at Chemung Hills Country club for dinner, after which business at hand was proceeded to be handled.

Dr. J. D. Bruce, Councillor, discussed the possibility and feasibility of a Livingston County Medical Society, bringing out and stressing the point in its favor, namely, the clinical material which will be brought to hand by the opening of the new hospital and the enlarging of the State Sanatorium for Tuberculosis.

The situation was discussed by Drs. Huntly and Browne, and Cunningham and it was decided to go ahead with the organization.

Dr. Bruce appointed Dr. Huntly temporary chairman for the election of officers. Dr. Davis was appointed temporary secretary.

On motion of Dr. Browne and second of Dr. Cunningham the temporary officers were elected for the coming year permanent office.

On motion of Dr. Browne and second of Dr. Cunningham, Dr. Hendron was elected to office of vice president.

No committees were appointed at this session, it being understood that the officers were to act as a body for all committees until further appointments were made.

The next meeting is to be held in August after the completion of the hospital.

Roll call as follows:

Browne, Cunningham, Davis, Huntley, Huntington, Hendron, H. Sigler.

Dr. Huntington was appointed delegate to the state convention and Dr. H. Sigler alternate.

L. A. Davis, M.D.

GRAND TRAVERSE-LEELANAU CO.

I wish to report the last two meetings of the Grand Traverse-Leelanau County Medical Society.

Regular meeting of the Grand Traverse-Leelanau County Medical Society was held June 5, 1928, at the J. D. Munson hospital.

President Edwin Rinear read a letter from Dr. Burr relative to a history of the local society; this matter was placed on file for the time being.

He then read a letter from Dr. G. A. Holliday who wished to resign from the secretaryship because of his recent injury which will probably incapacitate him for some time. With considerable regret, his resignation was accepted.

Moved by Gauntlett, seconded by Holdsworth, that Dr. E. F. Sladek be elected the new secretary. Passed.

The meeting was then adjourned.

The regular summer picnic meeting of the Grand Traverse-Leelanau County Medical Society was held at the Sladek's cottage on Long Lake on August 7, 1928.

The hosts of the evening were Dr. and Mrs. H. B. Kyselka and Dr. and Mrs. E. F. Sladek, who provided the following dainty menu: One whole baked ham, six pounds of broiled weenies, a bushel of potatoe salad, combination salad, creamed peas, bohemian sourkraut, swiss cheese, coffee, bohemian kolaches, and watermelon. Eighteen members did justice to the feed and then tried to do some business.

Dr. Don M. Griswold of Lansing spoke on "The Policies of the Michigan State Department of Health."

Dr. J. D. Munson gave a short talk about his winter in California, mentioning some of the work he saw in their larger hospitals.

Dr. B. Sladek of Cicero, Illinois, spoke of the practice of medicine in the large cities encountering the competition of free clinics of all sorts.

Dr. George F. Inch was elected delegate, and Dr. E. L. Thirlby as alternate, to the annual meeting of the State Society.

The meeting was reluctantly adjourned at a late hour.

I wish further, to give you a list of officers of the society, which were elected December 6, 1927, but which were not reported to you.

President, Dr. Edwin Rinear.

Vice President, Dr. Ralph Kernkamp.

Secretary-Treasurer, E. F. Sladek.

Medico-Legal Counsel, Dr. F. P. Lawton.

Thanking you for all past favors, and with the deepest regret that you were unable to come to Traverse to participate in our picnic feed, which was partially planned for you, I am

Fraternally yours,

E. F. Sladek, M.D., Secretary.

OAKLAND COUNTY

A meeting of the society will be held on Friday evening, September 21st, at the Old Mill Tavern, Waterford, Mich. Dinner will be served at 6:30.

Following dinner Dr. E. Kyle Simpson, Pontiac, will address the society on "Medical Practice in China—Ancient and Modern."

The following applications for membership will be balloted on:

Dr. J. J. Goldsberry, Pontiac; Howard University, 1926.

Dr. L. Warren Gatley, Pontiac; St. Louis University, 1925.

Dr. L. Thomas O'Brien, Pontiac; University of Illinois, 1914.

Dr. L. C. Sheffield, Pontiac; University of Chicago (Rush) 1925.

Dr. Alexander M. Carr, Royal Oak; University of Pennsylvania, 1918.

Dr. Morrell M. Jones, Pontiac; Detroit College of Medicine & Surgery, 1915 (by transfer from Wayne County Medical Society).

The following applications for membership by transfer has been received and referred to the board of directors:

Dr. James H. McCall, Pontiac; Detroit College of Medicine & Surgery, 1911 (from Marshall County, W. Va. Medical Society).

Members of the society may obtain the official automobile insignia from the Treasurer, Dr. I. C. Prevette, 22½ E. Huron street, Pontiac. Price \$2.00 each; \$4.00 for two. Most physicians use them on both front and rear of the car, and by so doing you are assured of every courtesy from traffic officers, and that you will not be molested for overtime parking on the streets of Pontiac.

Dr. B. C. H. Spencer, Rochester, has been nominated for the office of coroner.

Other nominations of interest to the society:

State Senator—Charles A. Sink, Republican, Ann Arbor; Charles P. Webster, Democrat, Pontiac.

Legislature, First District—James A. Lawson, Republican, Royal Oak.

Legislature, Second District—P. J. Miller, Republican, Walled Lake; Mark B. Armstrong, Democrat, Pontiac.

Canada seems to have the call as the place to spend a vacation. Dr. and Mrs. H. A. Sibley and family have recently returned from a trip to Montreal, going by way of the Canadian Soo, driving as far north as Cochrane and Lake Temiskaming.

Dr. and Mrs. A. V. Murtha made a ten day motor trip through Canada, visiting the Toronto Exposition, Montreal, Quebec and St. Anne de Beaupre.

Dr. and Mrs. B. M. Mitchel and family spent a two weeks' vacation at Park Hill, Ont.

Dr. and Mrs. J. W. Fox are on a motor trip through the eastern states.

C. A. Neafie, M.D., Secretary.

COMMON ERRORS IN CHOLECYSTOGRAPHY

The absence of a shadow after intravenous administration of the drug is regarded as one of the most certain indications of abnormality, denoting blockage of the ducts, a vesicle full of stones or debris, or an injured mucosa. But herein lie many possibilities of error, says Lester R. Whitaker, (Journal A. M. A.) In the first place one must be sure that there is no shadow, or that none can be produced. Sometimes a very faint shadow on the film escapes the eye, or poor management of the patient or faulty technic in radiography may fail to bring out the shadow. Since the gallbladder may reside anywhere in the right side of the abdomen it may be missed in the exposure; it may be so far off center that details will be obscure, or it may be overshadowed by the spine. The gallbladder should be located as nearly as possible by percussion and palpation of the liver, and the tube centered over it. It must be remembered that a deep inspiration lowers the gallbladder from 2 to 3 inches. Motion of the patient during exposure, straining to hold a deep breath, or intestinal peristalsis may erase delicate shadows. If there is a good deal of intestinal gas, an enema should be given. Careful roentgenologic technic is of extreme importance. Poor management of the patient with regard to feeding may result in failure to obtain a shadow and bring about an erroneous diagnosis. A faint shadow is another important criterion of abnormality in the gallbladder. But this can also be due to in-

sufficient penetration or exposure of the subject, ineffective development of the film, or emptying of the gallbladder when it should have been filling with dye, as a result of ill advised feeding. The gallbladder can be diseased to the point of cholesterosis and stone formation and still preserve normal concentrating and contractile power. Mottling or inequalities of density of the shadow, if definite and constant in succeeding films, and if differentiated from gas in the duodenum or colon, almost invariably means stones. Sometimes the question of mottling of a shadow is settled by giving a fat meal. The resulting contraction of the gallbladder often lifts it up underneath the liver, away from the gas-filled colon and duodenum, where mottling is significant. Furthermore, the volume of opaque material may be reduced enough to allow shadows of stones of low density, not at first noted, to be brought out by contrast. Giving a fat meal a few hours before the administration of the drug has been advocated on the ground that this empties the gallbladder and allows more effective filling with the dye, but it is better not to give a fat meal before cholecystography, else the gallbladder may be emptying when it should be filling with dye. Pribbaum has advocated the administration of solution of pituitary to empty the gallbladder before the dye is given. The first consideration is to be sure that the gallbladder is not emptying when the drug is given; the second is that preferably it shall not contain overconcentrated bile. With the oral method, two conditions are essential for the best results: (a) Digestion must be absent; (b) the drug must be protected from the action of the stomach and vice versa. If the gallbladder is reduced to one-tenth or one-twentieth its original volume in from one to six hours after a fat meal, one may be certain that its wall is not severely diseased and that it contains very little foreign material, probably none.

FOOD IMPORTANT "MEDICINE" FOR MENTAL PATIENTS

Good food and plenty of it is real medicine for patients suffering from mental and nervous diseases, according to Dr. David H. Keller, medical director of the Central Louisiana State Hospital. Dr. Keller, speaking before the American Psychiatric Association, Minneapolis, described an unusual method of feeding the mentally sick which has been tested and proved remarkably effective.

Patients in the Louisiana hospital are fed three generous sized, nourishing meals a day, chiefly rice, sweet potatoes, cane syrup, corn and other products of the big hospital farm. Every patient is weighed each month, and if he is underweight he gets an extra meal a day, under the direction of the ward physician.

Patients suffering from chronic pellegra get still more attention, with doses of fresh fruit, lemonade, milk, eggs, and oatmeal. Some of the violent patients, whose activity burns up so much energy that it seems impossible to keep them properly nourished, are fed as often as seven times a day, Dr. Keller reported.

The death rate at the hospital is very low, Dr. Keller said, and this is attributed largely to the food program which the hospital superintendent, Dr. John N. Thomas, has directed. Good physical condition leads to mental recovery in many cases, and hastens the recovery of others, Dr. Keller said.—Science Service.

THE DOCTOR'S LIBRARY

Offering Suggestions and Recommendations

RECENT ADVANCES IN DISEASES OF CHILDREN—Wilford J. Pearson, D.S.O., M.C., D.M., F.R.C.P., and W. G. Wyllie, M.D., M.R.C.P. London, with 18 plates and 32 text figures. 1928. 560 pages. Philadelphia. P. Blakiston's Son and company.

This is a very interesting little book on the subject. The contents are well arranged. Part I deals with a philosophy of disease. Part II takes up nutritional diseases. The third part deals with the different regions of the body. Worthy of comment is chapter XIX on x-rays and clinical diagnosis. The chapter alone is of particular excellence. The illustrations consist of fine reproductions of radiographs as well as detailed line drawings. The work is dedicated to the memory of William Harvey whose portrait forms the frontispiece of the book, the year 1928 being the 300th anniversary of Harvey's discovery of the circulation of the blood.

HUGHES PRACTICE OF MEDICINE—Including a section on Mental Diseases and one on Diseases of the Skin. Fourteenth edition. By R. J. E. Scott, M.A., B.C.L., M.D. New York; Sixty-three illustrations. P. Blakiston's Son and company, Philadelphia, Pa.

This fourteenth revision has been very complete involving changes and additions to almost every section. The treatment has been conservative. While recognizing the importance of new procedures in both diagnosis and treatment, the author has not lost sight of the fact that many of these are still on trial and may never find their way into medical literature. Among the new features introduced are those referring to, Tularemia, Viscerotoxosis, Dementia Praecox, Avitaminoses, Reh-fuss' Fractional Method of Gastric Analysis, Sippy's Treatment of Gastric Ulcer, Benedict's Test for Sugar, Graphic Methods in Cardiac Disease, Diabetes, Hay Fever, Asthma and Urticaria.

THE MEDICAL CLINICS OF NORTH AMERICA—July 1928; Chicago number; W. B. Saunders company, Philadelphia and London.

This volume contains thirty-one contributions from the leading clinicians of Chicago. Among the various subjects treated are: Phobias and Neurology of the Viscera by Dr. L. J. Pollock; Coronary Occlusion by Dr. Don C. Sutton; Diabetes, Late Results of Insulin Treatment by Dr. S. Strouse and B. Y. Glassberg; Eneurisis in Children by Joseph K. Calvin.

A TEXT-BOOK OF GENERAL BACTERIOLOGY—Edwin O. Jordan, Ph.D., Professor of Bacteriology in the University of Chicago and in Rush Medical college. Ninth edition, thoroughly revised. Octavo of 778 pages with 191 illustrations. Philadelphia and London: W. B. Saunders company, 1928.

Jordan's Bacteriology is too well known to the profession to need any lengthy introduction. When a book has passed through to the ninth edition it has not only demonstrated a demand but the fact alone means that it is fairly well known to the class of reader for whom it is intended. As the title implies this work is on general bacteriology

which includes non-pathogenic as well as pathogenic forms. Likewise the subject of bacteria in the various arts and industries finds a place. The chief additions and revisions of this ninth edition consist in the rewriting of the chapter on Parasitic Protozoa. The writer has added new material on the bacteriology of scarlet fever, erysipelas and rheumatic fever, also new information on the bacteria tularensis.

THE SURGICAL CLINICS OF NORTH AMERICA—June 1928; Chicago number; W. B. Saunders company, Philadelphia and London.

This volume contains twenty chapters on surgical subjects from the leading Chicago surgeons. The two volumes here mentioned cover fairly completely both medical and surgical methods as practised at the present time, so far as the subject's treated are concerned. Both are well illustrated.

PREVENTIVE MEDICINE—Mark F. Boyd, M.D., C.P.H., Member of Regular Field Staff, International Health Division of Rockefeller Foundation; formerly Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Third edition, Revised. Octavo volume of 475 pages with 151 illustrations. Philadelphia and London. W. B. Saunders company, 1928.

To quote from the preface: "The medical profession can play an important role in the field of preventive medicine and public health. At present physicians are neglecting these opportunities. If this neglect continues the opportunities will lessen and the field will be taken away from physicians by a changing public sentiment." This book deals with the subject in a clear concise way. There are extensive bibliographies at the end of the chapters for the student who would pursue the subject farther.

AN INTRODUCTION TO EXPERIMENTAL PHARMACOLOGY—Torald Sollmann, M.D., Professor of Pharmacology and Materia Medica at Western Reserve University, Cleveland, and Paul J. Hanzlik, M.D., Professor of Pharmacology at Stanford University, San Francisco, Calif. Octavo volume of 321 pages, illustrated. Philadelphia and London. W. B. Saunders company, 1928.

This is essentially a text book on the subject of pharmacology and a complete laboratory guide.

William Wood & Company announce the issuance of the Tenth Revised Edition of Stedman's Practical Medical Dictionary, in flexible leather binding at a price of \$7.50.

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In many cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

SYPHILIS CONSTANTLY INCREASING IN AMERICA

The American people are gradually becoming more and more "syphilized", reports Dr. Charles W. Burr, professor of mental diseases at the University of Pennsylvania, basing his opinion on his many years' experience with patients suffering from the end conditions of this disease. Change in the type of immigration during the last few generations and the letting down of social standards, particularly those which placed a bar between adolescent boys and girls, are the causes to which Dr. Burr attributes the increase. Immigrants from eastern Europe, where the disease is more prevalent, have brought it into this country in large numbers. Modern promiscuity, which has developed since the war, is playing a large part in the work of "syphilizing" the country.—Science Service.

FIND WAY TO REPAIR SEVERED KIDNEY DUCT

A successful way of repairing accidental breaks of the ureter or kidney duct has been announced by Warner S. Bump and S. M. Crower of the University of Illinois Medical School in a report to the Institute of Medicine of Chicago and the Society for Experimental Biology and Medicine of Chicago.

Often when a surgeon is performing a complicated operation around the kidney the delicate ureter is accidentally broken. Healing of such a break is accompanied by the formation of scar tissue which grows so that it eventually blocks the duct and makes that kidney useless. By means of rubber catheters, or tubes, the irritating fluid is diverted from the wound until it has had a chance to heal without scarring.

This method was first worked out on dogs, but has been used as an emergency measure on human beings with complete success.—Science Service.

PATHOLOGIC SLEEP

Walter Freeman, Journal A. M. A., discusses the question of a sleep center, pathologic sleep and narcolepsy. He concludes that sleep is the product of widespread cortical inhibition, probably the effect of some hypnotoxin that may be found in the blood and spinal fluid during states of prolonged wakefulness. In addition, there is a sleep center in the region of the floor of the third ventricle, which is acted on very powerfully by various chemical ions, as well as by inflammatory and neoplastic processes in the vicinity and by a generalized increased intracranial pressure. Prolonged sleep, arising precociously in the course of an intracranial disease, suggests the involvement of the infundibular area. Narcolepsy, sometimes associated with cataplectic attacks, may occur in the course of encephalitis or other malady, or it may be observed without known cause. The associated symptoms point to the tuber cinereum as the location of the disordered physiology, and focal lesions in this area have provoked symptomatic narcolepsy. Somnolence appearing in the course of suspected cerebral tumor is a signum mali ominis, for if it is precocious it points to an area that is difficult of access surgically and if it is late it indicates intracranial hypertension or a deep infiltrating growth. Somnolence is always symptomatic, whereas narcolepsy, although it may appear as the result of

local organic disease, is often unaccompanied by any other disorder, and may present the criteria of an idiopathic disease. It is consistent with a fairly useful life, and does not incapacitate the individual. The treatment of somnolence is that of the provocative condition, and as a symptom it may be disregarded. Since narcolepsy may occur without known cause, treatment can only be symptomatic and the condition may prove very rebellious to any treatment. Potent glandular extracts are suggested as the least unpromising.

MANAGEMENT OF TARSAL AND METATARSAL FRACTURES

John D. Ellis and John S. Coulter, Journal A. M. A., assert that the combined treatment of early reduction and proper splinting, with extension, physical therapy and elimination of focal infections and sources of toxanemia, will reduce the temporary and permanent disabilities of these fractures. The sinusoidal current for muscle stimulating has a definite place in the after-treatment of these injuries as a preliminary to voluntary exercise. It is often extremely difficult to develop the weakened invertors and the small muscles of the foot by voluntary exercises alone, especially in patients with atrophy of the disuse after long immobilization. Manipulation of any stiffened joints of the foot under an anesthetic is almost invariably a mistake. Generally within a week following this treatment such joints are stiffer than before or, if still movable, remain far too painful for function. This is particularly true in those injuries which have shown a "hyperplastic reaction."

EYE INJURIES BY AIR GUNS AND SLING SHOTS

In three cases of injury to the eyeball, reported on by Frank H. Rodin and Albert B. McKee, (Journal A. M. A.), two were caused by BB shot with a foreign body in the orbit, and the third by a sling shot causing a traumatic cataract and iridodialysis. The presence of the foreign body in the orbit was diagnosed by the roentgen ray. In one case the foreign body was spontaneously extruded sixteen days after the injury; in the other case the foreign body has been in the orbit for two months with no reaction on the part of the eye. A roentgenogram should be taken of all injuries to the eye by shots. The indiscriminate use of air guns and sling shots by children should be discouraged.

RAPID METHOD FOR REMOVAL OF PLASTER-OF-PARIS CASTS

David H. Snelling and Morris D. Cohen, (Journal A. M. A.), describe a rapid method for the removal of plaster-of-paris casts. With an ordinary cast knife, a superficial cut is made on the cast as a marker. A 25 per cent solution of sodium or potassium citrate is dropped from a dropping bottle along the outlined pattern. The cast is softened at once and is then cut with an ordinary scalpel or cast knife. The advantages of this method are: 1. The ease and rapidity with which a cast may be removed. 2. The elimination of elaborate cast-cutting instruments. 3. The ease and rapidity with which fenestras of any size or shape may be cut. 4. Its inexpensiveness. 5. The absence of chemical injury to patients or instruments.

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ADDRESS BY HON. FRED W. GREEN, GOVERNOR OF MICHIGAN

We live at such a high speed these days and have such a multitude of interests and diversions that we drop into a habit of accepting things as they are, as if they had always so existed and were not purchased at a great price of time and human effort, and not all so bloodless as the introduction of anesthetics in Scotland. I read the story that Dr. Simpson found unexpected opposition when he attempted to remove pain through the blessings of chloroform in the Scotch hospitals. The clergy said that God in his wisdom and knowledge had introduced pain into the world to keep man constantly humble and aware of his propensity to sin.

After due deliberation he replied to the theologians that he was unskilled in their line and not so well informed as to the purposes of Providence, but he did notice that the Bible said when God created Eve from Adam's rib, he put Adam into the deep sleep and that was all his chloroform would

do, and so heavenly precedence would permit him to do it again.

The theologians agreed that they had overlooked that point and the merciful ministrations of anesthesia was allowed to proceed.

We don't pay much attention to the heroes of medicine who have done wonderful things. It is rather late, but up in Grand Rapids on next Saturday they are going to dedicate a very beautiful \$400,000 bridge to William Dean. I don't suppose the name recalls so very much, but he was the one, one of the soldiers who offered himself in the yellow fever test, known only as Soldier X-Y, and over there they are going to honor his memory a little late, yes, and the captain who also offered himself, is going to attend those exercises. (Applause).

That case in Scotland that I have just cited was a classic example of "The public must be pleased."

The youth of our state should have listened in to President Randall's paper and perhaps that would lessen the complacency with which they accept the gifts of modern civilization and inspire them to carry on and add new discoveries to the legacy they inherit.

Perhaps some of you are commenting on how quickly a business layman seizes an opportunity to discourse on the value of advertising. I am not a fanatic who feels that the ills of every profession can be healed by a hoorah of publicity, but I do feel, as I have said before, that your profession needs among other problems to take definite steps to keep the public well informed of the progress of medicine and instruct the people how to discover the men most competent to practice the healing art.

I am not a prophet heralding a new thought. I merely emphasize a point frequently discerned in the past by thoughtful members of your profession as well as keen administrators of government affairs. In the last analysis, any idea, any law, any service, or any business or profession that deals with or touches the public, must have the approval of the people to make its contribution to modern life effective.

I can illustrate what I mean by referring to a State Department of which I am very proud. Speaking conservatively, the Michigan State Department of Health ranks with the very best in the United States. Its personnel is large and it is of the highest scientific rank. Its equipment is excellent and is constantly being improved. Its activities are broad and helpful and it is under the excellent leadership of Dr. Guy L. Kiefer. (Applause).

I am very glad to hear you applaud. You know, I think the appointment of Guy Kiefer is really justification for your having made me Governor. (Applause).

Under Dr. Kiefer's leadership the state is assured of securing every help that such a department should give to the people, as well as to the medical profession, but did such a department spring up overnight? No, no more than did the idea and the use of anesthetics, yet we accept its existence today little realizing it was organized fifty-five years ago and has been developing and expanding its usefulness every year.

Its success has been largely due to a policy handed down for its guidance and by Governor Bailey when he appointed the first members of the State Board of Health. Believing what he wrote to one

appointee would be of interest, I secured a copy from the files. It is dated May 1, 1873.

"Prof. Robert C. Kedgley:

"I enclose herewith your commission as a member of the State Board of Health to which I have taken the liberty of nominating you and I hope you may accept the appointment.

"I take the liberty of suggesting that the success of the measure depends altogether on the Board and not upon the law. If they accomplish something practical the people see of use in daily life and bring to the discharge of their duties plenty of the practical and not too much theory, avoid long disquisitions and elaborations, and bring the people into close communication with them in their work, I do not doubt the Board of Health will remain a state institution and be of inestimable value to the state.

"Please excuse the suggestions, but my own earnest desire to make it a success is my only reason for offering them."

So, you see, when I suggest a closer contact with the public, I am merely echoing an axiom formulated by a leader of the people long ago.

The newspapers today give evidence that the factories, the telephone companies, the railways, and the newspapers themselves wish to take the public into their confidence and show how they have served to advance civilization and are continuing to use part of the profits to discover new ways of service and how you as a profession can do the same can be worked out by yourselves in your group meetings.

Adequate publicity for your good deeds is not the only problem you have. As a profession that has served the people well, you have inherited a position of respect and confidence that cannot be too zealously guarded. You have codes of ethics and you carefully train your young men in college how to conduct themselves with the public, but have you given serious thought to the importance of not allowing poorly prepared men and charlatans to adopt the title "Doctor," and open offices to practice the healing art?

Every time a citizen strays into the hands of a quack or an incompetent practitioner, he comes away with a lowered opinion of the title of "Doctor"—if he is lucky enough to get away.

Why is it not possible for you men to inaugurate regulations making it impossible for a man or woman to come up for state examinations unless he is adequately prepared for life with a minimum of education? (Applause). And that minimum,

in my opinion, should not be too low. I believe this is of the greatest importance because people in need of medical aid should not have added to their ills the unnecessary worry as to whether their physician is competent. Perhaps you think they should know before they seek advice. I wonder if any of you appreciate the problem facing an individual in a new community when he suddenly needs a physician! Small wonder so many of them endanger their lives and take long trips to get back to their original homes where they know the individual merits of the physician in the community.

*It would be a great day for Michigan if some time a layman could open the door to any physician's office and know in this state the standards of admittance are highest and the title of "Doctor" cannot be usurped by any ambitious fellow half trained in medicine and improperly grounded in the essentials of medical education.**

The Bar Association has made great strides so far as their profession is concerned and *I say to you as I did to them, you will have my unqualified help and any necessary legislation to raise the standards of those allowed to practice the healing art.* (Applause).

Aside from the clergy, I know of no profession the public leans upon so heavily as the medical profession. Eminence such as yours carries penalties as well as rewards. One of the penalties is the duty of education.

You may think I am a great believer in the efficacy of law. Laws do not take their proper place in the community until such time as the majority voluntarily practice what the law seeks to codify. Your duty, therefore, to the public is to see that education along health lines permeates every corner of the populace.

I am glad to say that the time has come when medicine no longer is a mere treatment of diseases. Today your main aim is the prevention of disease and the maintenance of health. Naturally, the public must actively co-operate with you. That the public is willing to help has been shown by the number of successful campaigns against typhoid, tuberculosis and malaria.

In this connection I was interested in knowing that one of the first things the Dictator of Italy set out to do was to stamp out malaria in Italy. He drained the swamps and in the last two years he has

opened for cultivation two and one-half million acres of heretofore unlivable land. He was not only interested in raising the standard of living in Italy by increasing the amount of land, but he knew the health of the people is its greatest asset.

I do not have all the facts, but I venture to guess he took the people into his confidence and explained he was trying to do something for them. The necessity for educating the public is most astonishingly shown by the record of smallpox. In this country there is very little objection to vaccination as compared with former years. In that connection the situation in England is interesting. For a number of years England had a compulsory vaccination law. So long as it was in force the country was practically free from smallpox, but in spite of this fact the opposition continued and finally the law was repealed with the following result: Great Britain had more than twice as many cases of smallpox in 1927, as the whole of Continental Europe, 14,931 in Great Britain; 6,841 in the rest of Europe, and so far in 1928 there have been 7,000 cases in Great Britain.

This is a remarkable case of cause and effect, and whenever I see that an imported lecturer refers sarcastically to our standards of civilization as compared to England, I wonder if he is proud of that.

I do not throw that out to start an argument, but to show the necessity of showing the public the value of certain ways of acting and I think you physicians should take one step farther for us laymen.

Henry Ford has recently cleared the air of the idea that this is the age of youth and that every man beyond fifty should be shuffling towards retirement. Mr. Ford recently said that most of us past fifty, because we were past fifty, were too modest to refute it. He said that if the experience and knowledge of all the men over fifty years suddenly were withdrawn, the chariot of civilization would careen disastrously. I am not quoting that exactly, but that was about what he said.

I agree most emphatically. What this had to do with you as medical men is simply this: You have made great strides in life extension work. You have removed from infancy most of its peculiar hazards that chilled with fear a mother's heart, and perhaps the number of years you are credited with adding to the average man's life would be cut down if the infant statistics were cut down. I would not ask

* Italics ours.

you to do less, but I wish you could and would do more for those who have passed the mid years of life.

My interest in athletic contests doesn't need any comment, but I realize that forty thousand people watching a ball game or a boxing match do not derive much personal benefit from the physical exercise on display.

Also, much as I love active vacations in the open air, I realize that the complexities of modern life and the exacting strain of the economic struggle, prevent a large percentage of men from taking proper care of their physical equipment; therefore, if the public could look to you in the immediate future to lay great stress on the value of periodic examination and proper routine of living deduced from those, you would render an invaluable service to the public.

Perhaps it is just a layman's foolish idea that conflicts with your code of ethics somewhere, but what a splendid thing it would be if a man could get a note from his physician like a reminder he might get from his automobile dealer, saying, "Time to come in for a general inspection."

We talk about the assets that this state has in its broad acres of farms and woodlands, its mines, and rivers, and lakes, and what all these resources mean to the happiness and well being of our citizens, but who can set a cash value upon health? To paraphrase a popular ad, "Just ask the man who needs one." (Applause).

Whatever I have said tonight indicates my enthusiasm for your profession as a guardian of the greatest asset our citizens possess, health. I agree with the statement made by Nominee Hoover in his acceptance speech:

"It is the duty of the government to avoid regulations as long as equal opportunity to all citizens is not invaded and public rights violated."

In the past public welfare has been enhanced by wise public regulations. In the future we hope to have wisdom in recommending only such laws as are manifestly for the progress and well being of its citizens.

It is my hope that we can look forward to the medical profession to take us into their confidence, show us how to live longer, work better, and enjoy life to its fullest mellow conclusion. If you fail us, where shall we turn?

THE MANAGEMENT OF EMERGENCIES IN DIPHTHERIA*

J. E. GORDON, PH. D., M. D.

DETROIT, MICHIGAN

Too often with diphtheria insufficient emphasis is placed on the influence of concurrent or secondary infection, and on clinical variations dependent upon the particular part of the upper respiratory tract involved. The seriousness of a given case is definitely influenced by the extent of the process and the time elapsing between onset and the institution of specific treatment. At Herman Kiefer hospital, during 1927, diphtheria confined to the tonsils alone had a case fatality rate of only 1.1 per cent, essentially that of scarlet fever. If the membrane had extended to include portions of the pharynx and nasopharynx the mortality was 27 per cent. Nasal diphtheria was fatal in 7.4 per cent of cases, the laryngeal type in 19.4 per cent. The fatality rate for all cases of diphtheria was 12.2 per cent. An unusually severe type of infection has been prevalent during the past eighteen months.

Most diphtheria patients can be cared for under home isolation. Some few may be hospitalized to advantage. In certain instances hospital management is almost mandatory. These constitute the emergencies in diphtheria. Three main types may be differentiated; late cases with marked toxemia, and edema of the cervical tissues; instances of generalized paralysis developing weeks after the initial illness; and those patients with membrane of the larynx.

ADVANCED DIPHTHERIA

Death from diphtheria in present day practice results chiefly from circulatory failure. The condition is practically limited to a particular type of case. The history is usually of an illness dating back three to six days. Invariably they have been seen by a physician for the first time long after the onset of the infection. The child appears as if poisoned, the cervical lymph nodes are enlarged, there is extensive peradenitis, and more commonly than not, actual edema of the cervical tissues, sometimes extending down to include the chest wall. The term "bull-neck" has been used to describe the condition. Inspection of the mouth reveals an extensive membrane covering the tonsils, uvula, at times both hard and soft palates, and extending up into the nasopharynx. Nasal involvement

* From the Herman Kiefer Hospital, Department of Health, Detroit, Michigan.

is frequent. Usually no antitoxin has been administered, for the physician, recognizing the emergency, has ordered the patient to hospital at once. Treatment is often without avail. In 1927, more than half the deaths from diphtheria at Herman Kiefer hospital were within 24 hours of admission.

Three general principles govern the management of these patients; antitoxin, rest and fluids. In former years much discussion centered on the advisability of the single large dose of antitoxin as opposed to repeated smaller ones. The single large dose appears to be the more rational procedure, but the extent and behavior of the membrane constitutes the only reliable criterion. A practical procedure calls for 10,000 units if there be membrane on one tonsil, 20,000 units with membrane on both tonsils, 30,000 units if it has extended to the uvula or soft palate, and a minimum of 40,000 units if the nasopharynx or nose is involved. More antitoxin is indicated if the membrane continues to spread. Usually 40,000 units suffices for the severest cases; 100,000 units may be necessary. The serum is given intramuscularly by a method used almost without exception in contagious disease hospitals but rather uncommonly in private practice. The injection is made into the lateral aspect of the thigh. The absorption from these firm muscles is more rapid than from the gluteal muscles, greater comfort is afforded the patient in that he may lie in the prone position, on the back, or the opposite side, and most important there is little opportunity for infection, as the site is far removed from the anal and genito-urinary orifices. There are no large vessels or nerves in this region.

Serum by the intravenous route is frequently necessary in the treatment of these severe cases. If they have not previously received serum, it is invariably given intravenously in addition to the indicated intramuscular dose. Serum injected into the muscles reaches the blood stream in therapeutic concentration within about eight hours. Whenever the saving of that time might conceivably influence the ultimate outcome of the infection, antitoxin is given by vein. The danger of anaphylaxis is always to be considered if there be history of previous injections of therapeutic serums or toxin-antitoxin mixtures. A test for hypersensitization to horse serum is recommended, irrespective of history. If positive, the serum can be given in divided doses. A more practical measure and in our experience a safer one, was suggested by the observations of Friedberger and

Mita¹, and of Lewis², that if serum be given very slowly and well diluted the danger of anaphylactic shock is essentially eliminated. Lewis used a Woodyatt pump³, a motor driven syringe which continuously injects minute amounts of fluid over a period of hours. The procedure is however not practicable in contagious disease hospitals because of the difficulty in cleaning the apparatus, and consequent danger of crossed infections. The idea occurred to dilute the serum with relatively large amounts of physiological saline solution, and to inject by gravity under barely positive pressure, thus accomplishing the same end. The method has worked admirably and even with hypersensitive individuals, 10,000 units of antitoxin has been given without untoward effect. We have never had to discontinue an injection because of anaphylactic symptoms, and only a few accelerated reactions have been noted. They were readily controlled by adrenalin. The amount of saline solution is determined according to the age of the patient, 500 cc. for adults, about 250 cc. for children six years of age.

Next to antitoxin in proper dosage, the administration of fluids is important. It may serve three purposes. By increasing elimination, the toxemia is alleviated. These patients invariably are dehydrated because of mechanical difficulty arising from the mass of membrane in the throat; increased fluids are essential to correct water balance. Finally experimental work has demonstrated the existence in this disease of a deranged blood volume, apparently decreased, but in reality a distributive oligemia due to stasis of blood in the splanchnic circulation. This distributive oligemia, with a relatively decreased blood volume and lowered peripheral blood pressure, adds extra burden to a heart already suffering from degenerative changes.

Fluids in sufficient amount cannot be given by mouth because of the extensive membrane. Hypodermoclysis is painful and with children induces struggling and definite exertion. Rest and conservation of energy cannot be too greatly emphasized. Physiologic saline solution can be given by the intravenous route using the gravity method, practically without pain and with little or no resistance on the part of the patient. The advisability of intravenous injections in the presence of a damaged myocardium may be questioned. When relatively small amounts are given, 100 cc. to 400 cc. repeated two or three times within 24 hours, no untoward effect has been observed. Hundreds of pulse and

blood pressure determinations have been made during and following such saline infusions, and regularly there is a rise of blood pressure without appreciable change in pulse rate. Later in the disease with the first appearance of clinical signs of myocarditis, 10 per cent glucose solution is substituted for physiologic saline.

The frequency of secondary infection in severe cases must not be underestimated. Bacteriologic studies have demonstrated the not uncommon occurrence of streptococcus infections⁴, superimposed upon the diphtheritic process, best indicated clinically by a temperature range above that normally experienced with uncomplicated diphtheria. A streptococcal septicemia is by no means uncommon⁵. The swelling of the neck is extreme and soreness well marked. Hot moist compresses about the neck serve a good purpose. If the edema be essentially of diphtheritic origin cold compresses are preferable. Various streptococcus serums have been used with diphtheria antitoxin in the treatment of such double infections with indeterminate results unless the combination be that of scarlet fever and diphtheria⁶.

The association of diphtheria with Vincent's infection is not uncommon. Numerous instances are encountered where huge doses of antitoxin have been given, up to 150,000 units and yet the membrane has persisted for a week or more. The use of neoarsphenamine intravenously has at times resulted in the clearing of the throat from membrane within 24 hours.

Rest cannot be too greatly stressed and yet certain precautions must be emphasized. We have, at Herman Kiefer hospital, a standing order that no morphine or other opiate be administered to a patient with membrane in the throat. Diphtheria patients in the early stages of the disease are listless, depressed and toxic. Restlessness is usually due to respiratory obstruction and it is important to recognize this early. Such obstruction has been demonstrated by many post mortem examinations to be supraglottic, the accumulation of masses of membrane above the larynx. Secondary extension into the larynx is uncommon. The second or third day after antitoxin is particularly dangerous because acute stenosis with sudden death may arise from loosened membrane. When respiratory difficulty becomes marked, two courses are open. The membrane may be removed by suction with a mechanical aspirator. This failing, tracheotomy must be considered. Such a patient is evidently

not a good operative risk, and the death rate is high. Yet the relief of respiratory difficulty may save untold strain on the heart. Tracheotomy should not be done without definite indications, but unnecessary delay adds further hazard. Success may be attained even at the point of death.

DIPHTHERITIC MYOCARDITIS

As the membrane tends to clear from the throat, the major hazard presents itself, the beginning of circulatory failure. The signs are an increased area of cardiac dullness, pallor, drop in temperature, frequently to subnormal limits, painful enlarged liver, nausea and vomiting, and progressive changes in the cardiac sounds from softening of the first sound, to splitting of the second, and finally gallop rhythm. An important prognostic index is a progressive drop in systolic blood pressure.

With the membrane essentially gone and the danger of respiratory stenosis passed, the condition can best be combatted by use of opiates to the physiologic limit. The patient should be placed in blankets and every effort made to maintain body temperature by external heat. Edmunds⁷ of Ann Arbor has shown that intravenous glucose solutions increase the blood pressure, first through the nutritive action of the carbohydrate on the heart muscle, and secondly by increasing the blood volume. Furthermore he has demonstrated that after such glucose injections, the action of any cardiac stimulant is measurably increased over control conditions. The cardiac stimulant of greatest value is probably adrenalin. Pituitrin has been used with variable results which may be explained by the recent separation⁸ of two active principles of the pituitary body, a vasopressor substance and an oxytocic principle whose action is somewhat opposed. Perhaps the use of the pure vasopressor principle, B-hypophamine, will prove of more value, since its action is greater and is sustained experimentally for as long as 24 hours. Finally every effort should be made to keep the patient quiet. One might particularly warn against overnursing.

POST-DIPHTHERITIC PARALYSIS

The more successful the early management of these massive diphtheritic infections, the more surely one encounters another type of emergency. The patient recovers from the acute illness and regains satisfactory cardiac action. He appears well on the way to recovery. Then one

paralysis follows another, first palatal, then pharyngeal, oculomotor, ciliary, laryngeal, and paralysis or paresis of the extremities. There is marked loss of weight and progressive weakness. Eventually the accessory muscles of respiration may be affected, and after 30 to 40 days the diaphragm. Mucus collects in the throat, the patient has trouble in taking liquids or nourishment, and there is respiratory difficulty.

It is rather axiomatic that if one can keep such a patient alive for 10 days after development of respiratory embarrassment, that eventual recovery is assured. Nutrition should be maintained by rectal or tube feeding. Strychnin in full doses is of value. Alcohol may have certain stimulative effects, and certainly is a good means of affording nourishment, because of its high caloric value. Glucose intravenously is of value. Finally every effort must be made to prevent respiratory collapse. Frequent aspirations of the throat by suction, and oxygen inhalations at the critical period may be life saving; often it is necessary to artificially aid respiration.

LARYNGEAL DIPHTHERIA

Another type of diphtheria constitutes in most instances a real emergency. General surgical cases are commonly considered emergencies if operative procedure is demanded within one to three hours. Laryngeal diphtheria oftentimes must be cared for within that many minutes.

All cases of croup should tentatively be considered diphtheria. Hospitalization at the earliest sign of dyspnea is desirable. Home management is possible, but attended with difficulty and danger. Complete stenosis may develop within a few minutes.

Even with the discovery of antitoxin and the development of intubation the death rate continued for years to average 40 per cent to 50 per cent. Formerly much discussion centered on the relative merits of intubation and tracheotomy. Results with intubation have been so satisfactory, however, that rarely is primary tracheotomy done in hospital practice. Under home conditions, tracheotomy is preferable. The dangers from blocked or coughed intubation tubes are too great.

The management of this disease under hospital conditions is relatively simple. A medical personnel, well trained in intubation, is essential. Tracheotomy is done only as a last resort, and that usually for tracheo-bronchial cases. Direct suction

with a mechanical aspirator is one of the newer methods; at times long strands of membrane can be moved from the lower respiratory tract. No opiates are used, whiskey not at all, and stimulants but rarely. Steaming is not used in diphtheria cases, but is uniformly practiced for laryngitides of the common cold type, catarrhal laryngitis.

The real essentials are eternal vigilance, a personnel trained in intubation, and good nursing. The usual fatality rate for laryngeal diphtheria is three to four times that for total diphtheria cases. With the above methods the results attained with 166 cases during the past 15 months show a case fatality rate for laryngeal diphtheria of 15.1 per cent during a time when the general hospital rate for diphtheria was 12.2 per cent. In the city at large, during the same period, the mortality for diphtheria was one of the highest among large American cities.

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COMPOUND FRACTURE OF FEMUR— REPORT OF CASE*

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The following case is reported to illustrate some of the principles involved in the treatment of extensive lacerated and contused wounds, and in the treatment of compound fractures of the femur. It serves as a striking demonstration of the wonderful power of repair of tissue and restoration of function of which nature is capable. The case also serves as a graphic example of the way one is often rewarded for conservative methods, and efforts to save the maximum amount of tissue.

CASE REPORT

F. C., female, age 7, was admitted a few minutes after being run down by a heavy truck. One wheel of the truck passed over the right thigh. Examination showed the patient to be in considerable shock and there was evidence of a good deal of hemorrhage. There was an extensive laceration of the right thigh, extending from the

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knee along the anterior surface almost to Poupert's ligament, and then encircling the medial aspect of the thigh for about two-thirds of its total circumference. The distal flap outlined by this laceration was very dark. All of the muscles on the medial side of the femur were crushed and there was a fracture of the femur at about the middle. The ends of the bone were protruding through the skin.

The patient was given the usual treatment for shock as a preliminary to surgical treatment of the wound. An ethylene anaesthetic was then given and a debridement of the wound carried out. The whole traumatized area was first thoroughly irrigated with several quarts of saline solution, followed by a very weak iodine solution (1 ounce of Tr. iodine to a quart of water). All gross dirt was removed and as much skin and muscle as was obviously devitalized beyond repair.

During the course of the operation there was an unusually small amount of bleeding. The femoral vessels had been exposed by the trauma, but as far as they could be seen, were uninjured, except that the adventitia had been stripped off in several places. The fracture was reduced, but no internal fixation used. The wound was then completely closed in layers without drainage. Adhesive strapping was applied and the limb suspended in the vertical position with ten pounds traction.

The following day the child's general condition was considered satisfactory. The pulsation of the dorsalis pedis was rather faint. On the next day the right foot was swollen and mottled and rather dark. The dorsalis pedis was not palpable. All of the spiral adhesive straps and bandages were cut to prevent their interference with the circulation and the vertical type of traction was substituted by a Thomas splint in the horizontal



Figure 2
Showing area of necrosis on calf.

position. Traction was maintained by a Steinman pin through the os calcis. External heat in the form of electric lights was applied to the leg. Following these changes, the appearance of the extremity improved considerably. Because of a low hemoglobin and red cell count, a blood transfusion was given.

On the following day it was evident that the circulation of the skin flap on the thigh was entirely inadequate for its viability. The next day this flap, being entirely gangrenous, was excised. (Fig. 1). There was no infection under it. At the same time it was also evident that there would be considerable necrosis of tissue below the knee. As soon as this area was sharply demarcated it was excised. The tissue removed consisted of nearly all of the skin and muscles on the lateral, posterior and medial aspects of the leg. (Figs. 1, 2 and 3). The tibia was bared of everything except periosteum for a distance of about six inches on the posterior and medial surfaces. Most of the peroneal group was also excised. Part of the deep fibers of the gastrocnemius were not involved.

The area from which the tissues in the leg were excised, and also the large area on the thigh left bare by removal of the devitalized skin, soon covered with granulations and were skin grafted. Thiersch and Reverdin grafts were removed from the other thigh and abdomen. All of the grafts took.

When the patient left the hospital about two months after the injury, all the areas on the leg and thigh had almost completely epithelialized. Because of the instability of the ankle as a result of the loss of muscles controlling it, the patient was equipped with an ankle brace. (Fig. 4).

Now she walks without a brace. The defect



Figure 1
Showing areas of skin necrosis on thigh and leg.
(After skin grafting.)

in the leg, covered by a felt pad and stocking, is not noticeable to the ordinary observer. Apparently enough fibrosis of the tissues of the lower leg and foot took place as a result of the

circulatory disturbance that the ankle is fairly stable, and a brace is no longer necessary. The patient is now as active as she was before the injury.

COMMENT

In the first place, the patient had such a ghastly wound, and was in such severe shock that there was considerable temptation to administer the shortest possible anaesthetic and amputate at the level of the fracture, leaving the stump open for drainage. Our previous experience with ethylene anaesthesia led us to believe that there would not be much additional risk attendant to the use of a longer anaesthetic required for a debridement. On the other hand, the extent and location of the injury brought up the possibility of subsequent amputation, either as part of the treatment of sepsis in the wound or for gangrene of the leg. It was felt that it would be worth while in an effort to save the extremity, to take the chance of a later amputation. We were rewarded by complete healing of the thigh wound without the slightest infection and by a nearly complete restoration of function in the leg in spite of complications.

THE PRESENT STATUS OF THE DIAGNOSIS AND TREATMENT OF CANCER

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Two surveys recently undertaken: one, in conjunction with Dr. D. T. Sandweiss, under the auspices of the Detroit Department of Health and the Cancer Committee of the Wayne County Medical Society of all the deaths from cancer in Detroit during a six months period; the other undertaken for the American Society for the Control of Cancer, of the facilities available for treatment of cancer in 20 American cities,* have given us an opportunity to gauge the average status of the diagnosis and treatment of cancer. This brief discussion will be based upon the material collected in the two surveys. It is presented as data and facts, more to stimulate thought or point the way toward future activities than as fixed conclusions.

Some of the facts brought out by the detailed study of each case in Detroit were: In the first place after we had obtained all of the data about each case from all of the doctors in attendance and the

* Saltzstein, H. C.: The Average Treatment of Cancer; J. A. M. A. No. 7, Vol. 91, Pg. 465, August 18, 1928.
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Figure 3
Showing area of necrosis on calf.



Figure 4
Brace to stabilize ankle. Note appearance of leg.

hospital record, in 3 per cent the diagnosis was thought to be more likely other than cancer. In another 7 per cent, the original site of the disease was changed from that stated on the death certificate; for instance, some cases were signed as carcinoma of the abdomen and upon investigation it was found that the woman had had an operation for cancer of the breast some years before; or one signed as general carcinomatosis was found after analysis of the history to have been more likely carcinoma of the colon. We were surprised to find that in a six months period the number of operations for cancer of the breast was about twice the number of death certificates signed for cancer of the breast during that time. For instance, in Detroit in six months there were 45 deaths from cancer of the breast, while during the same period in all of the hospitals in Detroit 95 women were operated upon for cancer of the breast who lived in Detroit. We found similar ratios in several other cities. When corrected for persons living outside the city who were operated here, and those operated elsewhere subsequently dying here, the ratio remains about the same. Though this is a rough estimate, it obtains so generally, that it must be significant.

There is considerable variation in the type of operations done for cancer of the breast. All surgical text books and articles state that the procedure has been standardized for thirty years, but even in Detroit we can find variations. Similar variations in technical methods of breast amputations were noted in the different cities. For instance, one hospital shows perhaps one-third radical operations, and when the axilla is invaded local excision plus deep therapy is relied upon. Another hospital does only complete radical operations; another does mostly complete radicals and a few semi-radicals, etc.

In breast cancer in Detroit we found that the average duration of symptoms before the operation was 9.3 months. We also noted that there was no marked medical delay in breast cancers; that is, in very few cases did we find that there was an interval of more than a month between the diagnosis of cancer of the breast and the operation. Hence this nine months delay must be attributed almost entirely to the patient. This was noted in the survey of the several cities; that is, most of the surgeons who were asked said that a large proportion of the doctors (generally over 60 per cent) did not delay in the diagnosis of cancer of the breast. This is an impor-

tant point practically for it means that publicity, such as Cancer Week drives, etc., must be repeated continually. The idea that a lump in the breast is dangerous—the most easily grasped popular fact about cancer—has not been sold to the entire female population of the country as yet.

ALIMENTARY CANAL

It was a little bit surprising in going over these charts to note that every third one had died of cancer of the stomach; also a little bit disheartening, for as regards what has been accomplished for patients with cancer of the stomach, the sum total of the average effort is nil. We had about 110 stomach cases whose histories were detailed enough for analysis. In those where the information regarding medical observation was obtained, we found that there was an average period of medical observation of these cases of indigestion of 8.5 months before the diagnosis was made. The total duration of the illness before operation was about 11 months. The difficulties in the diagnosis of cancer of the stomach in the stage early enough for resection are quite formidable; this has been commented upon frequently of late. The only working rule whereby more of these cases will be discovered soon enough to do anything for them is that any indigestion in mid-life, especially suddenly appearing indigestion, should be treated with extreme suspicion until proved otherwise, and perhaps the patient's good money and the roentgenologists' good time must be spent (often for negative findings) to make the responsibility of treating this patient safe. To be curable in any significant proportion of cases, cancer of the stomach must be considered as an acute disease, for a matter of only a few weeks very frequently must make the difference between being able to do a complete resection and inoperability. Only 18 per cent of our cases of cancer of the stomach started from previous indigestion. The remainder started as suddenly appearing indigestion in a middle-aged person otherwise in good health.

In carcinoma of the rectum and colon the same in general applies, but the cases are much less common than are those of the stomach. Many colon and rectum cancers come to operation but they generally come in late stages; for instance, four of 12 deaths from carcinoma of the colon already had perforated, causing peritonitis at the time of the operation. One interesting case was drained vaginally for a supposed pelvic abscess, the carcinoma being found at post-mortem. This fact, i. e.,

that the first definite sign of carcinoma of the bowel may be peritonitis from perforation is not so generally appreciated. Usually in going over these histories one can find that the patient has suffered from mild lower abdominal distress, cramps and loss of weight for a period of several months, but she has with all of this gone about her business, and probably has consulted a doctor no more than three to four or a half-dozen times. One gains the impression that to diagnose these cases of colon and rectum cancers early, a doctor must be on the jump and grasp perhaps the one or two chances the patient gives him to diagnose the case early. The signs of colon and rectum cancer are obstruction and bleeding, but as Dr. E. G. Martin says, increase in constipation or any change in the habits or previous regularity of the bowels, demands suspicion. Before there is obstruction these are irregular, atypical, sometimes vague attacks of lower abdominal cramps. These are probably due to the growth causing reflex disturbances in the physiological action of the bowels. Reverse peristalsis caused by such a tumor in the left colon may produce attacks of pain in the right side of the abdomen simulating appendicitis. There is on record a case where perforation of the cecum with abscess was caused by a carcinoma in the recto sigmoid, the intensity of the anti-peristalsis eventually rupturing the bowel at the thinnest portion—the cecum. Diarrhoea can also be explained by this disturbed physiological action, for a small non-obstructing growth can produce diarrhoea when there is no colitis present.

TREATMENT

One very surprising thing to us was the number of cancer patients who in a city like Detroit ran the entire course of their illness without any treatment (X-ray or radiation) and died what one might say was a normal cancer death. Seventeen of 75 deaths from breast cancer (22.6 per cent) were not operated upon. Only seven stomach cancers out of a total of 122 were radically resected. Of 100 cervix cases, 20 had no treatment, (radiation or radical removal).

One hears a good deal popularly about the dangers of cancer of the lip. We only had six deaths from lip cancer during the six months, so that neoplasms in this body region cannot be a large factor in the ultimate control of cancer.

Concerning the results of treatment one must always be prepared for discouraging

figures when an average situation such as this is studied. The average total duration of illness of the untreated stomach cancer was 13.9 months, (86 patients). The total duration of illness of 20 patients who had palliative operations (gastroenterostomy, exploratory laparotomy, gastrostomy) was 13.3 months—0.6 of a month less. The total duration of illness of seven who had radical resection (and died subsequently) was 20.4 months. These figures do not include those who did not die of the disease, but because so many died in a very short period of time after treatment that error cannot be very large. The average operative mortality of radical resections for cancer of the alimentary canal is approximately 50 per cent. This was obtained in three different ways: 1. All of the radical resections of stomach cancer done in Detroit in two years (1925 and 1926) were analyzed. There were 28 cases, and 14 of them died post-operatively—46 per cent operative mortality. 2. This six month series shows an average operative mortality of resections of the stomach, colon, and rectum for cancer in 1927 of 50 per cent exactly; 22 resections, 11 deaths. 3. All of the resections for cancer of the stomach, colon and rectum in 75 hospitals in 19 cities were reported upon, and the operative mortality was: Stomach, 40 per cent; colon, 44 per cent; rectum, 49 per cent.

The results of treatment of cancer of the cervix were quite a disappointment.

We analyzed 100 consecutive deaths from cancer of the cervix in Detroit. Twenty of these died having had no treatment (meaning radiation or operation, for no other treatments were considered). In 71 cervix cancers who died after having had radical hysterectomy or radiation the average length of life after treatment was approximately 14.2 months. If one computes from the beginning of the first symptoms, the 20 untreated cases lived seventeen and one-half months, the treated ones 25 months after the onset of the disease—just eight months longer. About half of those treated had no freedom from recurrence at all following operation or radiation treatment. Within two years 86 per cent had died, and 95 per cent had recurred. Of course, this must be interpreted with the reservation that this series includes only cases who have died; but the fact that in 71 treated cases only 15 per cent died more than two years after treatment, in only 5 per cent was there freedom from recurrence for more than two years, must make any interested per-

son pause to consider. The reason for this is chiefly that cancer of the cervix comes very late for treatment. When the pelvis is fixed and frozen, the discharge is foul smelling and there is pain in the back, very few of these cases are cured. A symposium on cancer of the cervix reads somewhat like a travesty on human nature. Many cases are reported upon and usually 50-60 per cent of cures in early cases can be obtained, but when one analyzes the figures, one finds that the early cases are relatively few, and a small part of the total cases under discussion.

In the survey of the several cities over half of the surgeons said that they still preferred to operate upon early carcinomas of the cervix but scarcely more than a dozen radical hysterectomies for cervix cancer were reported as having been done in 1927. The travesty is that with means of such relatively proven value at hand we are permitted to use them so infrequently. Probably more ground will be gained by continued attention to pre-cancerous conditions—erosion, chronic endocervicitis, lacerations, etc., than actual treatment of cancer of the cervix once it has developed.

GROUPING

In general there is relatively little early cancer seen in free hospitals or city institutions where large free services are maintained. The early cancers, those amenable to treatment which may be curative, are seen in private hospitals and the private practices of the best surgeons and roentgenologists in the city. This is a general statement which obtained throughout all of the cities visited. The average surgeon who sees many cancer cases is well along in years and is generally among the most active men surgically in the community. This stands to reason, because the public well enough knows the seriousness of the malady and the care required to treat the disease. No one person treats very many cancers and the impression very definitely was gained, that end results were not known as completely as might be. When one considers that the average duration of the untreated breast cancer is 36 to 40 months, and that cancer varies in its individual peculiarities just like pneumonia or measles or scarlet fever does; i. e. one cancer may last 20 years untreated while another has a course of maybe less than that many weeks, there is a cogent argument for further study of the end results of treatment.

In Detroit for example, there are about 200 operations for cancer of the breast

each year, 100 cervix cases are treated, and a total of 40 to 50 carcinomata of the entire alimentary canal are radically operated upon. In six months the total experience of all of the surgeons in Detroit in radical resections of the alimentary canal was 4 stomach resections, 4 colon resections, 5 rectum resections and 9 sigmoid resections. Of these 22 cases 11 died. It is felt that this is not by any manner of means a sufficient number of cases for any one surgeon in the city to collect his statistics and know at the end of five years just what has been accomplished. The cancer division of the Department of Health in association with the Wayne County Medical Society has been pondering over the problem of what is the best way to use the money obtained and the facilities offered for the betterment of the diagnosis and treatment of cancer. It has finally felt that nothing better can be done for a start than to offer all of the hospitals, surgeons and radiologists a combined follow-up system, wherein all of the cases of cancer in certain body regions, say starting with breast, alimentary canal, and cervix will be registered, and these checked with the deaths as they come in. The experience of the entire city in the treatment of malignancy will thus be pooled, and the advantages in study of large numbers of records, ordinarily available only at a large clinic or university hospital, be thus available to the profession more generally.

MEDICAL EDUCATION IN ENGLAND, FRANCE AND GERMANY

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The methods of teaching medicine and the internal organization of the medical schools of the leading countries of Europe—England, France and Germany—differ widely. In France and England the arrangement of medical education places more stress on the practical, while in Germany theory is the chief concern.

ENGLAND

In England medicine is taught in different hospitals which are absolutely independent of each other and only nominally connected with the same university. The students are not only students of the uni-

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versity but also of the special hospital. Each hospital is provided with all the necessary equipment for a complete medical curriculum (physics, chemistry, anatomy and physiology included) that covers about five and one-half years. The first year is devoted to the study of the preliminary sciences, biology, chemistry and physics, one and a half years to the preparation for the intermediate examination in anatomy, physiology and pharmacology, and the remaining two and a half or three years to advanced medical studies. At the end of the first two periods the student must take a written and oral examination.

The clinical study is carried on in the different wards and operation theaters of the hospital. The students spend considerable time in the wards accompanying a physician or surgeon, as the case may be, who demonstrates and teaches during the routine examination of the patients. The students also visit the out-patient departments and operation theaters where they are personally engaged. In each ward there is a lecture theater where clinical lectures are given, the number of which differs in each hospital, but generally being much fewer than those in France and Germany. In England more time is devoted to practical than to theoretical work. The students in attendance reside in the hospital, so that they can spend more time in clinical practice and attend night cases, such as births and accidents.

Most students belong to an athletic club with its own grounds where they spend their free time. Enrollment in the sport club is in many hospitals obligatory.

To qualify as a doctor the diplomas may either be those of the university or the conjoint board. These diplomas give the same license to practice, but that of the conjoint board is not so difficult to acquire.

FRANCE

The French universities are similar to those of the other continental countries where all the hospitals are associated with one university to form a unit. The students are free to attend the hospitals without special permission or enrollment. In France there is no preliminary study, the students beginning their clinical study immediately after matriculation. From the beginning anatomy and physiology are presented at the same time as clinical courses and lectures. The premedical sciences, physics, chemistry, botany and zoology, are not included in the medical curriculum, as their study is a necessary pre-

requisite to matriculation in the medical school.

Many clinicians familiar with both the English and French systems criticize the French for this reason. They seem to favor the separation of the preliminary from the clinical study; nevertheless there are clinicians and laboratory men who uphold the present system as the more interesting to the student. Indeed one has to be a French student to know how interesting it can be to attend clinical courses and lectures without understanding either the case or the medical language.

The French curriculum is planned to cover five years. During these five years the student is in attendance in the different wards of the hospital in the morning and at quizzes and lectures given by the faculty in the medical school in the afternoon.

Each clinical "stage" lasts from two to three months during which the student must pass the forenoon in the service of one definite hospital under the direction of the faculty. However, he is free to select the hospital and should its quota be filled he is given a second or third choice.

Generally during the "stage" at nine o'clock there is a lecture in the hospital amphitheatre which is rather elementary, so arranged for the students who do not yet know anatomy and physiology. It prepares them to understand something of what they will experience in the clinic. After this lecture they make rounds in the wards with a physician or surgeon of the hospital staff who interrogates and helps them in the examination of the patients, explaining to them all that is necessary about the diseases as well as laboratory methods. At the end of these rounds there takes place a clinical demonstration of an interesting case. Twice a week this is conducted by the chief of the clinic, and on the other days by an assistant of the staff. The laboratory methods are taught in the laboratories of the clinic generally before commencing the rounds. Most of the clinical demonstrations which are made concern the cases which they will visit afterwards.

In the afternoon different courses and lectures, which are purely theoretical and without demonstration of patients, are given in the medical school by the faculty. These lectures, except for those included in the "courses," are not obligatory to the students.

In the French medical course the clinical teaching is considered most important; therefore clinical training is the

main thing and the rest of the work is secondary. At the end of each year the student must pass certain rather rigid examinations; in consequence, the final examination is much easier than in England and Germany.

GERMANY

In Germany the medical education differs from that in France and England in the teaching, especially. There the whole study consists of different courses and lectures with demonstrations. They are generally very good, better than the English and French; however, they constitute the whole medical teaching. There is no practical training except in the anatomy courses, and the whole clinical period which is the most important in the medical study is entirely theoretical. The German curriculum is arranged in two divisions, the preclinical and the clinical. The preclinical lasts four semesters under the new regulations, under the old regulations, which are yet in force, it lasts five. It consists of the study of anatomy, physiology, chemistry, physics, zoology, and botany. There is a minimum of courses and lectures which the students must attend. Each student has his own class attendance book which is certified by the professor at the completion of each such course or lecture, which the students are always free to arrange as they think best.

At the end of these four semesters, and only after a successful termination are they admitted to the clinic. The clinical period lasts three years, during which time the students attend the different clinics and hospitals, all day long. In every hospital there is an amphitheatre where "clinical courses" and "lectures" are given, in each of which there are from one to three demonstrations with patients by the chief of the clinic. A very careful history is taken, and clinical and laboratory examinations are made by the assistants, so that the professor has only to repeat and explain the case in the best possible way. There is not much difference between the clinical courses and the lectures, since they are both theoretical. In the courses the "praktikant", as the student who attends the courses is called, is asked by the professor, probably twice or thrice in a whole semester, to examine a patient whom he has never seen before, make a temporary diagnosis and give a short discourse before all the students. That is more mere form than instruction, for no one could seriously consider a short examination and temporary diagnosis, made only four or five times in each year, would be of much bene-

fit to the student. The students generally never see the same patient twice.

More practice is offered to the students during vacation than during the school year. For this purpose the vacation periods are longer than in England or France. They last five months; two months between the winter and summer semesters and three months between the summer and winter semesters. Then the student may enter any clinic as "famulus" or volunteer, and as such he is generally placed in the laboratories but also makes or helps in the clinical examinations. Occasionally he may be placed in the wards and out-patient rooms without definite duties or responsibilities, where he makes himself useful as far as he can without becoming a nuisance. The famuluship is not obligatory, but the majority of students, out of necessity, have been "famuli" at least twice in medicine and twice in surgery. There are also many private courses which include more practice, given by the assistant, but even these do not resemble those in England and France.

The Germans are aware of the fact that the student after his "Staatsexamen" (final examination) knows much theoretically but very little practically, and realizing that the practical side is exceedingly necessary for later practice, they introduced the "practical year". After the student has passed his diploma examination and is already a doctor, he cannot begin private practice until he has been in a clinic as an assistant for a year. He is free to choose the clinic and specialty he prefers. While there is no special examination at the end of this year, he must receive a certificate from the chief of the clinical staff signifying that he was always present. One year is the minimum required for practitioners. For specialists the number of years of assistantship differ with the specialty.

COMMENTS

Generally the French and German students have more freedom than their English colleagues. They are free to attend the hospitals and the professors they prefer, and are treated like men rather than school boys. They may arrange their studies as they wish, and they feel a great responsibility for their careers. They take their work more seriously than do those whose course is prescribed without alternatives.

EXPENSES

The fees paid for the medical study in England vary with the year and hospital,

but on the average are about \$600 a year. In Germany about \$25 is paid every semester to the school; then for each course or lecture there is a special additional fee. Altogether these amount to about \$150 a year, not counting examination fees. In France the fees are less than \$25 a year for everything, including lectures, courses and examinations.

SOME OBSERVATIONS IN OTOLARYNGOLOGY AT THE VIENNA CLINICS

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Vienna has since the last half of the eighteenth century enjoyed a well merited fame as a great medical center. This fame in spite of the wonderful progress made in this country and other places, it still maintains without challenge. In addition to its great hospitals, university, and clinics, it has been fortunate in possessing men who have not only been pioneers, but also great teachers. Each year finds a large number of American physicians going to Vienna to take advantage of the post-graduate teaching and also the opportunities for research work. The field of otolaryngology is from the standpoint of the teaching, probably more developed than the other branches and is consequently most attractive. When it is realized that in Austria very little of the practice of medicine is done privately, one can understand the reason for the tremendous amount of material available at the clinics and hospitals. In noting here a few observations made during my stay in Vienna last winter, it is possible to present but a few of the surface scratchings.

One of the most interesting and popular figures in otolaryngology is that of Prof. Eric Ruttin. There is always a large attendance at his classes and at the Rudolph Hospital where he holds his morning clinics. He impresses his students with the thoroughness of otologic examinations. The details and appearance of the drum membrane are brought out with specific emphasis. In this way several cases of osteopsathyrosis were discovered. These patients have the classical syndrome of blue sclera, brittle bones and otosclerosis. Very few men leave the clinic without a thorough mental picture of the so-called "level line" of the acute catarrhal otitis. In these latter cases there is a secretion of mucous that gathers on the floor of the

middle ear and the level of the fluid can be seen through the transparent tympanic membrane. These cases arise as a rule from an acute upper respiratory infection and produce symptoms of fullness and impaired hearing. Pain is rarely associated, and the tympanic membrane may appear normal. The diagnosis can be established through the appearance of the "level line." The treatment is inflation by catheterization or Politization; sometimes it may be necessary that a paracentesis be done. Regarding the use of the paracentesis, Professor Ruttin is very conservative. Local treatment with two per cent phenol in glycerine, combined with general care is the plan of attack and this failing, the paracentesis is resorted to. Professor Ruttin emphasizes the bacterial side of the acute otitides. In order to obtain a pure culture of the infecting organism, the paracentesis knife as it is withdrawn from the drum is immediately immersed into the culture tube. This avoids contamination from subsequent swabbings.

In regard to mastoid operations, Prof. Ruttin believes that there are too many "commercial mastoids" done in the acute stage. This applies, too, to the chronic cases, where often the patient, instead of obtaining improvement, finds that his hearing is worse and the pathology is unchanged. In testing the vestibular reactions, Prof. Ruttin emphasizes the caloric reaction over all other tests. The Barany chair and the galvanic tests may be used, but the results are not so dependable as in the caloric reactions.

In the treatment of chronic suppurative attic inflammations Professor Ruttin is both painstaking and thorough. The granulations and secretions are carefully removed by instrumentation, the curette being the instrument most used. When the opening into the attic is well established Professor Ruttin uses warm seventy per cent alcohol which he injects by means of an automatic syringe, devised by himself. The attic cavity is literally flooded with alcohol and this treatment is employed about twice a week. In the operative technic of mastoid operations, Professor Ruttin employs the hammer and chisel almost exclusively. This is the method of choice of the Viennese school. The operative wound is left wide open and is thoroughly packed with iodoform gauze. The wound is allowed to heal by granulation, and it is rather rare to see a depression in the postoperative wound. Professor Ruttin applies Cehasol to the wound margins postoperatively. This prepara-

tion, made from fish fossils, is used as a preventative for eczema, skin irritations, and to promote healing.

One of the most interesting otologic clinics in Vienna and probably in the whole world is that of Prof. H. Newman at the Allgemeines Krankenhaus. As far as the amount of operative work done, this clinic far surpasses any other in Vienna. Many of the adult cases are done under local anaesthetic with surprisingly little discomfort. Exposure of the middle and posterior fossae, and also the lateral sinus is carried out almost routinely. The method of approach to the labyrinth is by the technique developed by Professor Newman. An opening is made behind the horizontal external canal so that the posterior semi-circular canal is reached and this is continued forward so as to join the ampullae of the external and posterior canals. The problem of non-surgical ear disease, as otosclerosis, and chronic catarrhal disease is as much a stumbling block here as elsewhere. The Newman clinic has installed a complete physiotherapy department for these cases, and this method of treatment, while helpful in some cases is frequently employed because "something must be done."

Prof. G. Alexander's clinic at the Allgemeine Polyclinic is always a fountain-head of interesting things to the otologist. Those interested in diseases of the ear in infancy and childhood find Professor Alexander a veritable encyclopedia. Professor Alexander emphasizes the relationship of gastro-intestinal upset with ear disease. Fifty per cent of the infants under one year of age having gastro-intestinal disturbance have an accompanying otitis media and mastoiditis. The diagnosis of acute otitis in the first months is not easy. A normal appearing drum may have secretions behind it and a reddened drum may be due to passive congestion as a result of crying. A complete picture of the case must be had for diagnosis. Professor Alexander, too, belongs to the conservative school. He is particularly opposed to the double mastoid operation. Professor Alexander believes that in a double mastoiditis, one side is worse than the other. Operation on the worse side brings a spontaneous improvement on the less affected side. Most double mastoidectomies are "commercial" operations, he declares. Professor Alexander does not advocate a tonsil and adenoid operation before the child reaches the age of six years. An operation done before this age is not without danger to the ear. He recalls that in addition to the lymphoid tissue in the pharyngeal vault

and at the entrance of the eustachian tube, there is the so-called Gerlach's tubo-tonsil. This lies within the eustachian tube and may hypertrophy if a tonsil and adenoid operation is done in the very young. This secondary hypertrophy may cause an intractable case of chronic catarrhal otitis. In the surgical treatment of acute otitis Professor Alexander depends a great deal on the history of the case. He explains that during the first twenty-four hours of the acute inflammation, there are no secretions present, merely an engorgement of the mucous membrane. The next stage is an oedema and it is only after the fifth day that we find either a secretion or exudation. At this latter period, the time is ripe for the paracentesis. A paracentesis done earlier will produce none or a scanty flow and the incision may close before free drainage is established. Those cases that give a history of free discharge within the first twenty-four to forty-eight hours are cases with a longer onset than the history indicates. A case may be overlooked when the symptoms are mild or not alarming and only at the time when there is severe pain, fever, or general symptoms is the history of the case proclaimed. More care in history taking will reveal the truth of these facts. The paracentesis may be done at two points; the first, the point of election is through the cone of light, the second, or point of necessity, is through the part that shows the most bulging. Professor Alexander advocates a wide incision, but also employs a paracentesis "gun" which produces a small stellate opening in the tympanic membrane. Haste should be avoided in advising mastoid operations. There must be temperature, drooping of the posterior superior wall or other classical symptoms before operation is advised. Persistent discharge in itself is no immediate indication for operation. Temperature is an important symptom. The change from a purulent to a mucoid discharge is a sign of spontaneous healing. Professor Alexander's simplified technic for outstanding ears is of much interest. He makes a horizontal incision posteriorly through the cartilage in the region of the triangular fossa. A stay suture causes the edges of the cartilage to overlap and this draws the auricle closer to the head.

Dr. H. Brunner, assistant in Professor Alexander's clinic, has developed a new muscle operation for facial paralysis. He anastomosis the masseter muscle with the orbicularis oris. The technique is new but promises much for these unfortunates.

In Prof. M. Hajek's clinic there are many

things of interest to the visiting rhinolaryngologist. Professor Hajek is a teacher of great force. His clinic is divided into several departments which are well organized and well manned. In the bronchoscopic clinic, Dr. Hasslinger has devised a simple technique for Lipiodol injection of the lung. He cocainizes the pharynx and larynx, as in preparation for a bronchoscopic examination. A rubber catheter is passed through the nose and by means of a laryngeal mirror is guided into the larynx. The patient is now ready for the injection and is taken to the fluoroscopic room where the solution is injected through the end of the catheter projecting from the nose. If the right lung is to be examined the patient leans to the right and it takes but a few drops to cast a shadow of sufficient diagnostic importance. The patient may be moved in any posture desired and by the aid of the law of gravity, any desired area can be filled. On diagnosis of sinus disease, Dr. Hofer, first assistant at the clinic, emphasizes the use of the probe. Utilization of the probe should not be a lost art for it helps materially in establishing a diagnosis. In probing the sphenoid, he places the probe at the base of the sphenoid and then gradually brings it up until he finds the ostium. In regard to operative work on the ethmoid and sphenoid, most of the men at the clinic employ the technique developed by Professor Hajek. In exenteration of the ethmoids, Dr. Hofer performs his work in steps, the removal of a few cells is first undertaken and if no response is had, he advances further. A complete exenteration may be done in a period of six months to a year as the case may require. The Halle endonasal, ethmoid, sphenoid, and frontal as well as tear sac have found favor with many of the men in Vienna. The Halle endonasal, ethmoid, avoids the danger zone of the cribriform plate and cannot be used in those cases where the middle turbinate has been resected. It is in this respect that the real difference between the Hajek and the Halle ethmoid operation lies. In regard to nasal polyps, it is interesting to note that Professor Hirsh teaches that sixty per cent of endonasal polyps are from the maxillary antrum. This he explains accounts for many failures when only the ethmoid is considered. Sinus cases are divided into the acute which are treated paliatively and the chronic which usually means operative intervention.

The profusion of material at the Hajek

clinic makes it possible to see laryngeal cases of all types. Cases of carcinoma of the larynx are not infrequent. They are treated surgically as soon as a diagnosis is made. A laryngeal fissure or complete laryngectomy is done depending upon whether the case is intrinsic or extrinsic. The use of Roentgen ray and radium is not looked upon with favor in these cases. In the treatment of tuberculosis of the larynx, the quartz light is employed directly to the larynx by means of reflectors. In severe cases of ulcerations, the cautery needle is used. The results observed under these methods were favorable.

The tonsil work done in the Viennese clinics as well as other continental clinics is not on a par with the work done in America. The American technique and routine far surpasses that of the continent.

A question frequently asked one who has returned from Vienna is whether a knowledge of German is necessary to undertake post-graduate work. It is fortunate that practically all the lectures and courses given in otolaryngology are in English. This is exemplified by Professor Hirsh's request that all answers be given in "Classical English." This is not so in other fields, particularly pathology and medicine, where a knowledge of German is paramount.

In answer to the question whether a visit to Vienna is worth while I can only emphasize that it is a wonderful experience and of much profit to any serious minded student who desires to work.

HISTORY OF PEDIATRICS

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Most histories of any subject begin at the beginning and relate events as they transpire chronologically. In this very short and incomplete outline of the history of pediatrics, the writer wishes to reverse the order and start with contemporary figures and work back hoping thereby to hold the interest of the reader as we deal with problems of today, then of yesterday, and of the past, going, as it were from what seems the full light of today back into the darkness of the past.

And yet it is hardly right to call our present day the day of full light for there are many problems of pediatricians which are not better understood now than they were in the days characterized as the full blackness of the night. Such problems as

the causes of sarcomatous growths which appear to occur spontaneously in the bodies of our young; the causes of the scourge of anterior poliomyelitis; the etiological factors in the cause of such prevalent diseases as measles, chicken pox, small pox, are still unsolved; even such a vital problem as why one mother has an ample supply of milk for her offspring while another mother has none, is still a subject of investigation.

These and many other equally important problems remain yet to be solved. Therefore we might change the description of the present, from the full light of today, to the more accurate descriptive phrase, the twilight of today.

Passing from what has been left undone let us turn to that which has been done and cite as we gradually recede into the past the valiant work done by those who have gone before us, rendering due homage as we pass.

Many splendid things have come to pass in our own day which have helped to make the work of the pediatricist more understandable and efficient.

Take for example the problem nutrition. The development of such universally used foods, as lactic acid milk and protein milk are the immediate results of pediatricists who are still living, but the basis of their work was laid long ago by the observations of clear visioned men; as an example, Abraham Jacobi noted that if he gave diluted hydrochloric acid with his cow's milk feedings his babies did better. He himself confessed that he did not understand why, and in theory ascribed the beneficial effect to a fallacious cause, but we know now that when he added the hydrochloric acid to the cow's milk he was satisfying the butter substance just as truly as we now satisfy it by the addition of lactic acid. The only difference is he added it not knowing why, and we add it knowing why. Protein milk which is of such general use by pediatricists of today in the treatment of diarrhoea passed through long and difficult birth throes. The value of the protein of cow's milk in controlling fermentative processes was the result of hundreds of researches and keen clinical observations through a long period of years before the manufacturers of today were enabled to put on the market such a usable product as is now offered. When one thinks of the early days of the individual making of protein milk in the formula rooms attached to infants wards one cannot be too grateful for the work of

such a manufacturer as Hoos for example, who was the first and for many years the only manufacturer of this extremely important specialized infant food. Nor should we pass the subject of present day manufacturers without expressing in general our appreciation of these men, who spent much time and money in perfecting such products as dried milk, milk addition such as sugars and cereals, all at the suggestion and in cooperation with pediatricists of highest reputation, until today we are supplied with products into whose manufacture has been put the very best engineering and mechanical skill, prepared under perfect sanitary conditions and best of all, these manufacturers have seen fit to limit the distribution of their products to the prescription of the physician.

Not only have we been helped to feed infants artificially much better than the pediatricists of the past, but the whole conception of the processes of growth have been partially clarified through the comparatively recent discovery of the accessory food substances known as the vitamins. While it is true that these additions affect mankind as a whole, yet the largest and most important results are attained when the principles of vitamin feeding are applied to the growing young. This work has all been accomplished in our generation and the name of Funk, the actual discoverer, will be associated with this great advance in our better knowledge of growth. Many discoveries are made by laboratory workers which would remain unutilized were it not for keen clinical observers who take the findings of the laboratory worker and apply them to the problems of medicine. Such a clinician was L. Emmet Holt whose splendid work in making pediatrics the specialty it is today, is most noteworthy. He seemed to have the ability to take the knowledge gained in the laboratory and apply it at the bedside. For many years Dr. Holt was the leading clinician and teacher of pediatrics on this continent and few are the pediatricists of today who have not come under the spell of his enthusiasm and energy. To him, perhaps, more than any other person, are we indebted for having transferred the practice of pediatrics from an empirical to a scientific basis. Not only is he well known to pediatricists of today, but many of the children of the past generation owe the foundations of their present good health to the precepts and practices instilled into the mothers through their strict adherence to Dr. Holt's handbook for

mothers on the "Care for Infants and Children". Perhaps no one small volume has had such a power in this country in enabling mothers to raise their children in the proper manner.

Quite different was the effect of John Howland on the progress of pediatrics of today. If Dr. Holt could be called the embodiment of clinical observation, Dr. Howland, his pupil, might well be called the same for laboratory investigation and it is to his influence that most of the important pediatric teaching positions are today filled by men who combine to a high degree the ability to carry on laboratory investigation as well as apply the results of their laboratory findings to their clinical problems. Dr. Howland was such a man and it is to the ability not only to direct laboratory study but to actually take part in it himself, coupled with indefatigable energy that gave to us the monumental work on the chemical studies of rachitis together with the application of physiological chemistry to many other problems connected with the practice of pediatrics.

All too soon his work was cut short from an affliction which was thought to have been caused by his close contact with his laboratory. But his spirit of work, which was contagious, has been implanted in the hearts of his students, many of whom are filling positions of great importance in the fields of pediatrics.

Another great man in the annals of pediatrics is that of Abraham Jacobi. He was at the height of his career at the beginning of the twentieth century and did much to establish pediatrics as a distinct specialty in this country. Although he, himself, was an internist of great renown in his earlier days he contributed much to pediatric literature, was a great teacher all his days. In the later years of his life he devoted himself entirely to pediatrics. He was a magnetic and forceful speaker, a clear thinker and one of the last of what we are wont in this day to call "the old school" the family physician. He maintained a very close relationship with the development of pediatrics abroad, and it was through his efforts that many eminent men from the continent came to America to assist in upbuilding the struggling specialty of pediatrics. He it was who brought over many new methods devised by such continental teachers and practitioners, as Escherich, Keller, Baginsky and others, of his time. He was beloved by all his conferees who honored him with the position of highest distinction and was affectionally

called "The Nester of American Medicine."

Pediatrics in America to be at all complete must mention the name of Thomas M. Rotch, whose influence over the whole of New England, and wherever Harvard men are practicing is still very potent. In the early days when artificial infant feeding was a mystery and every step taken was a step in the dark, the profession owes much to the work of Dr. Rotch in developing methods of artificial feeding which has many followers to this day.

Before passing to a consideration of the development of pediatrics on the European continent it would be interesting to watch the development of institutions for the care of infants in this country. Today practically every general hospital has its infants ward, and there are many hospitals throughout the country which devote themselves entirely to the care of children. It seems impossible that these should not have always been in operation but from the beautiful and well equipped buildings of today given over to the care of infants, it is a far cry to the small clinic connected with the New York Medical college on Thirteenth street, New York, organized in 1860 as the first special clinic for the diseases of the young. Today we have special medical journals given over to discussion of children's diseases and in many medical journals, pediatric articles find a ready acceptance.

Numerous are the text-books on the pediatric specialty, all the product of the last thirty years. Thus it will be seen that in America, we have grown from very small beginnings into a very numerous group. Dealing as the pediatricist does with the very young, and consequently with the mothers of the young, it is not boasting to say that the specialty has attracted to itself men of high qualities of heart and mind and America may well trust its young to their kindly ministrations.

At the time when America began to develop the practice of pediatrics as a specialty, our conferees on the continent had the specialty pretty well established with clinics devoted entirely to the care of the young and a considerable mass of pediatric literature to their credit both in the form of monographs and current publications. As early as 1850, ten years before the establishment of the first clinic for children in this country, over 7,000 articles had been published relating to diseases of childhood. The stupendous task of classifying this literature was undertaken by Frederick Ludwig Meissner. Most of the titles

being published in the first half of the nineteenth century. The gradual development can be glimpsed by noting that in the eighteenth century only 75 published documents are on record while in the seventeenth, only 21, in the sixteenth, still less with 16; in the fifteenth century are two recorded articles appearing within a year of each other. The first year by Paulus Bagellardus, dated April 21, 1472, is the first recorded article bearing directly in diseases of children. The second article in point of time was published on December 7, 1473, and bore the distinguished name of Bartholomeus Metlinger and appeared 20 years before this continent was discovered. This article published so long ago had as a title "Ein vast nutzlich Regiment der jungen Kinder," which might well be used as an appropriate subject for discussion today.

The sixteenth century produced some worthy workers, among them may be named Thomas Phaer, who might well be called the Father of English Pediatrics. He it was who published the first book on pediatrics printed in English. It was called the "Boke of Children" and appeared in 1545.

There were many giants among the workers and writers of the seventeenth century. No greater contributor to the advance in the knowledge of diseases of children appeared in the annals of literature of that period than that of Thomas Sydenham.

This name after three hundred years is still attached to one of our common diseases in children, viz. chorea, and is often in our day called Sydenham's chorea. He was the first to accurately describe scarlet fever. A pupil of Sydenham named Walter Harris did some excellent work in pediatrics and published a book, "De Morbis Acutis Infantum", in 1689, the preface to this book indicates his state of mind in undertaking such a work. "I know very well in how unbeaten and almost unknown a path I am treading; for sick children and especially infants, give no other light into the knowledge of their diseases than what we are able to discover from their uneasy cries, and the uncertain tokens of their crossness; for which reason several physicians of the first rank have openly declared to me, that they go very unwillingly, to take care of the diseases of children, especially such as are newly born, as if they were to unravel some strange mystery, or cure some incurable disease." The first real text-book was published in 1784 entitled "A Treatise on the Diseases of Children",

by M. Underwood and this might be well taken as the date when pediatrics was established as a definite clinical entity. Most of the work previous to this was confined to studies of specific diseases and to review this period would be to discuss the arduous studies of men emerging from the baneful influence of the middle ages when superstition still held sway and witches potions were considered most powerful. To those men who, under such handicaps were able to see and record accurately clinical phenomenon, we owe a great debt of gratitude. It required a great display of genius to evolve a system of practice adapted to infants and young children when the procedures for adults were so crude especially in respect to the huge doses of cathartics, resort to sweatings and repeated bleedings. Even in the pediatric text books of one hundred years ago the procedures were so drastic that it is a wonder that any but the most lusty infants were able to live through them. It does not seem possible that the gentle art of healing of today could possibly have as its precursor such vigorous and persistent treatment as recorded by William P. Dewees, M. D., in a "Treatise on the Physical and Medical Care of Children," published in 1826, just over one hundred years ago. In his treatment of measles, I quote, "In attacks of severity, especially where much cough, oppression, or pain in the chest attend; the first remedy we can properly use is blood letting; the quantity must be regulated by the age of the child, the force of the disease and the immediate effect of the remedy." "In the aid of the bleeding we should employ mercurial purgatives. It may become necessary, where the pneumonic symptoms continue after the bleeding, to draw blood from near the seat of the local affection by cupping, and this to be followed by a blister."

In describing the treatment of the anginose state of scarlet fever, he states, "Let the treatment commence by brisk puking with tartarized antimony. The emetic should be followed by purging with calomel and jalap. The emetics may be followed by a cayenne pepper gargle."

Thus it will be seen that the practice of pediatrics has undergone great changes in the past, and I doubt not that historians of one hundred years from now will shudder at some of the procedures in common use among us today.

Let us gird ourselves, in spite of this, and do our best to advance the knowledge of this most important of all the specialties.

CONGENITAL DYSTROPHY OF THE HAIR AND NAILS

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This is an entity, hereditary in origin, and presenting considerable interest not alone as to the nature and appearance of the condition itself, but also as to the nationality of those involved. It is apparent from a study of the rather meager literature, that practically all of the individuals and families involved were French or of French ancestry. In Detroit, where there are many people of French or French Canadian descent, we have heard of three families having this disease and as near as we have been able to determine they were not related. In a recent article, Jacobsen¹ also has noted the occurrence of this condition in those of French descent and the family which he reports was of Franco-German origin. White², Eisenstaedt³ and Barrett⁴ mention that their cases occurred in those of French descent while Tobias⁵ does not mention the nationality of his case. Most of the other articles are by various French authors describing cases in people of their own nationality: an early and important article being published by Nicolle and Hallipre⁶.

It is of interest that this condition as near as can be determined is restricted to the French or in those of French descent and presents an interesting problem in heredity as regards disease. The condition appears in and is transmitted by both sexes, but apparently it is only transmitted by one having the disease. There has been a possible instance reported by White in which the disease was transmitted by an unaffected person. However, one who has the disease may have children unaffected by this condition. In the family under observation, the condition has been known to exist for six generations and has been fairly accurately traced back to an ancestor who migrated from France to Quebec.

REPORT OF A CASE

A. D., age 20 years, appeared at Harper Hospital clinic for examination because of weakness following an attack of the grippe. At that time the abnormality of the hair and nails was noted. A general physical examination showed the patient to be fairly well nourished, the eyes reacted properly, the teeth were carious, the tonsils had been removed, the thyroid was small, the heart and lungs were normal, the abdomen was lax, liver and spleen not enlarged, the knee jerks were present. No adenopathy. Genitalia well developed. The patient is fairly intelligent and industrious.



Figure 1

Lateral view of hand showing distorted nails and bulbous finger tips with thickened corneum.

Of interest is the hair of the scalp which is sparse, discreet, very soft and lanugo in type. It is easily extracted without pain. The axillary and inguinal hair is sparse. The patient states that he needs to shave but once or twice weekly.



Figure 2

Appearance of both hands.

The fingers appear to be of average length, but the nails seem to start farther back and being short give the fingers the appearance of being considerably longer than the average, almost acromegalic in type. The ends of the fingers and toes are bulbous and covered with thick corneous



Figure 3

Appearance of feet showing abnormal toe nails.

skin. This same thick corneous skin is present over the palms of the hands and soles of the feet. The nails are thickened, very convex and project away from the nail bed. When first seen the nails were fairly long, the nail bed was in good condition because the patient had not worked for

several weeks. However, when seen later after he had worked and subjected his fingers to trauma, the nails were broken, the nail bed was

inflamed, oozed blood and pus upon slight pressure and presented a decidedly unpleasant picture.

The temperature was normal, pulse 72, blood pressure 130/80, Wasserman negative, blood sugar .087, blood nitrogen 27 mgm per 100 c.c. of blood, blood count normal, basal metabolism -9%.

X-rays of the hands revealed no bony changes aside from added density of the nails. X-rays of the skull showed no evidence of disease of the pituitary or other intracranial disease—Dr. William Evans. X-ray of the lungs showed no abnormality.

The patient was given thyroid extract gr. $\frac{1}{2}$ TID for considerable time without any apparent improvement, although he seemed to perspire more. The nails were not influenced by the therapy and so the patient abandoned treatment.

The patient's family was then examined and this condition was noted in the father and two daughters, two other sons and three daughters were free of the condition. In none of the family involved was the thyroid palpable and in one girl the palate was high and arched. The family as a whole was not very intelligent, but all had fairly good health. There was no history of epilepsy or definite mental disease except that a sister of the father was said to be "peculiar."

GENERAL CHARACTERISTICS OF THE DISEASE

It occurs in both sexes and is transmitted by both the male and female. The individuals afflicted frequently present mental disease as they are subject to epilepsy, hysteria, tic, feeble mindedness, and speech defects.

The nails of the fingers and toes are thickened, brittle, usually shortened, while the nail bed is generally inflamed, discharging blood and pus. The vertical striations are exaggerated. The ends of the fingers are bulbous and the skin over the finger tips is very hard and upon the palms is corneous. Tobias states that other epidermal abnormalities as ichthyosis, keratosis palmaris, epidermolysis bullosa may exist.

The hair of the head is sparse, soft, downy and lanugo in type. There is lack of pigment and the hair is easily extracted. The scalp appears normal and healthy. The eye lids and eye brows seem unaffected while the hair upon the face is sparse; the father, a man of 48 years, shaved once weekly. The axillary and public hair is also sparse. White made microscopic studies of the hair and found no striking abnormality. Eisenstaedt states that the hair grows slowly and that the individual hairs are pointed and none are broken or split. Tobias stated that the teeth showed premature or late eruption. In our family many had widely spaced and badly diseased teeth. It seems to be the general consensus of opinion that the condition is due to an endocrine disturbance particularly involving the thyroid gland and Barrett reported



Figure 4

Appearance of the head of the patient showing thin discreet hair.



Figure 5

Appearance of the head of the father who also has the disease.

improvement with thyroid extract but no cure.

It is distinctly hereditary. Barrett in his excellent article upon this subject states that, "The defect tends to occur in a mendelian type of distribution, but the varied character of the abnormalities appearing in relation with the type defect of nails and hair is perhaps too complicated to be explained in a simple mendelian formula. The character of abnormal hair and defective nails behaves as a mendelian dominant. All persons that have the defect give a mixed progeny when crossed with normals."

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PROPOSED RESEARCH IN EPILEPSY*

R. D. DIXON, Med. Supt.

Michigan Farm Colony for Epileptics

WAHJAMEGA, MICHIGAN

For several years we, of the Michigan State Institution for Epileptics, have been promoting an argument for an institutional feature which we believe is unique, in that such a feature does not exist in any state or public institution for the care of epileptics, so far as we are aware.

It has been our continuous policy to have under way investigations and studies of problems related to epilepsy to the end of contributing some definite part to the sum total knowledge of the subject. In these studies we have met the usual difficulties and obstacles with which public institution men are familiar—chiefly, lack of facilities, both material and personal; frequent and un contemplated interruption of work; no possible definite program of procedure, and an apparent lack of appreciation on the part of state government of the value or feasibility of systematic and concerted research to such an extent as to call for an expenditure of money in an amount beyond that which can be made available for such a purpose by the curtailment of other essential institution activities.

Believing that an, as yet, unsolved problem which is recognized as sufficiently significant to warrant a two million dollar investment in housing facilities, and over a quarter of a million dollars layout for maintenance annually, is of such prime importance as to warrant further the establishment and support of a definite institution department for the sole purpose of research, we have asked the state of Michigan to found at its institution, such a department.

Under existing conditions the institution's budgets, as passed by legislatures, are based upon a careful determination of the minimum possible cost of feeding, clothing, keeping warm, and giving meager medical service to a group of so-called state wards. Our blank forms for reporting proposed budgets to the state departments and legislatures contain provisions only for the foregoing items. Each biennial period for the past eight years we have added to the budget sheets the classification "Research Department", and have proposed amounts varying from \$15,000.00 to \$25,000.00 for that purpose. To date these efforts have availed nothing tangible, but have promoted no little discussion of the proposition, which has gradually assumed a more favorable aspect. We now have a justifiable confidence that the forthcoming legislature will provide adequately for that purpose.

The reasonableness of such a department is substantiated by two fundamental principles—first, the very large annual expenditure for what amounts to very little more than custodial care of epileptic dependents, and second, the readily acknowledged paucity of our exact knowledge of the subject of epilepsy. There is no other malady with the prevalence of epilepsy, about which we have so little positive knowledge, and concerning which we disagree so widely on the features on which we are inclined to think we are so well informed. It is not necessary to detail this general principle. We have no agreement on the pathology—in fact, we do not agree that there is or is not a specific pathology of epilepsy. Some of us consider epilepsy as a definite disease entity—as definite as tuberculosis or syphilis, while others emphasize its comparability to certain symptoms as fever or cough. Some of us believe the disease is definitely organic, while others describe it as functional or as psychogenic. We do not agree as to what factors are necessary in order to ascribe the term "epilepsy" to a given malady. Some

* Abstract of Paper read at American Psychiatric Association, Minneapolis, June 4, 1928.

emphasize the motor manifestations as characteristic; others the disturbance of consciousness, and others the personality qualifications. We diagnose epilepsy with all or any, or even none of these classical traits, just as some clinicians recognize scarlet fever with no rash and no fever.

We concede that a person does not abruptly become an epileptic at the moment of his first so-called seizure; that he must have represented a departure from the normal for a period more or less definite, prior to the convulsive onset, but we do not agree as to what constitutes the characteristic preconvulsive qualification. Some of us deem essential an ancestral study of a patient, while others are satisfied to ascribe the whole affair to a gastropnoxis. The whole subject of a possible infectious agent should be reviewed. Much has to be done on the subject of induced convulsions and a comparison with epileptic convulsions. We must observe more induced convulsions in epileptic persons. We might go on at length citing the interesting and important possible relationships of diet, protein sensitizations, endocrine relations, reflex irritations, body fluid chemistry, heredity, endotoxins and exotoxins, trauma, many biochemical problems, and therapy in its great breadth, as being in dire need of intensive research study. We believe that there is, in a large percentage of cases, a definitely diagnosable stage of epilepsy preceding the stage characterized by convulsions and temporary disturbance of consciousness. This stage we consider comparable to the incipient stage of tuberculosis, or the pre-cancerous stage of carcinoma. Its determination and recognition in epilepsy bear the same relation to the arrest or cure of the disease that the determination of the incipient tuberculosis or even the predisposition to tuberculosis bears to the prevention, arrest, or cure of that disease.

In our minds this phase of the proposed research bids fair to be the most fruitful and a clear solution of it would make unnecessary much study of later phases. We have under way some efforts at a study of a large group of children, in the effort to determine some who are potential epileptics, or really incipient epileptics, and then check our judgments by developments as years go on.

We are not even hopeful that these essential features can be satisfactorily or successfully worked out with our present method of making research a mere incidental in the routine of institution activ-

ities. There does not seem to be a place for even part time research in the regular program of our institution staff. Even then many creditable pieces of research on the subject, in recent years, have come from the men engaged at institutions caring for epileptics.

It seems to us that all arguments point to the need and absolute necessity for established research departments or laboratories on this subject, and that these laboratories should be located at every state institution for epileptics. We would propose such a department as just as distinct in an institution as is the laundry or the farm. Let it be set up in the budget as a definite department, with an allotted finance and a prescribed personnel. We should not let this department absorb the regular clinical laboratory or any other presently existing phase of institution work, except insofar as individual features of work can be properly ascribed to research. If possible we would want a separate building, or at least a distinctly separate portion of the hospital, set aside for this department. The department must then, of course, be well equipped and given a personnel highly respected for capability and skill.

While the management and supervision of the several thus established research laboratories would be the direct problem of the individual institutions, the designation of suitable specific studies and the encouragement of certain work might well come from an organization such as this—the section on convulsive diseases. An annual program could be worked out and allotted, having in mind each institution's peculiar capabilities or equipment, and a combined report made public, or at least submitted to our annual meetings. A committee of this section might keep in touch with the work as progressing in the several institution laboratories during the year, and perhaps lend some assistance in securing the establishment of such work in those institutions not able to take up the work at once.

Our plea, then, is for the establishment of departments of research in each state institution for epileptics; the promulgation of a definite program of research each year; and the correlation of this work under a committee of this section of the American Psychiatric Association.

NOTE—Following the reading of this paper the section on Convulsive Disorders of the American Psychiatric Association organized a research program for the next two-year period.

Dr. Adolf Meyer, Professor of Psychiatry, Johns Hopkins University, accepted the chairmanship of the research com-

mittee. This committee will formulate and allot to the institutions for epileptics, definite research problems to be worked up, with responsibility for complete reports at each meeting of the association.

SEVERE SERUM REACTIONS

J. C. S. BATTLE, M. B. (Tor.)

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It is generally appreciated that the use of antisera prepared from horses may be followed by more or less severe constitutional symptoms. This phenomenon may appear at any time within four weeks of the day of the injection but usually between the seventh and eleventh days inclusive¹. It constitutes the well known "serum sickness", and is of the nature of an anaphylactic reaction. A previous injection of serum may render the patient more sensitive, causing a more severe effect which is often nearer to the date of the injection than usual—the so-called accelerated reaction; not only are the ordinary signs of serum sickness intensified, but there also occur in severe cases, signs of cardiac depression and respiratory embarrassment such as are associated with anaphylaxis in animals². These attacks are infrequent and rarely fatal, but they are alarming to the physician, to the patient and to his friends.

Biological preparations containing horse serum are used extensively nowadays in prophylactic and therapeutic medicine, and it would seem that many individuals, chiefly children, are being sensitized to it, and may react severely if a subsequent injection of an antiserum is given. This would appear especially so with the use of toxin-antitoxin mixtures, some of which, although they contain small amounts of horse serum, have been known to induce sensitivity in persons to whom they have been administered. Reports of severe reactions in such individuals when an antiserum was given bear out this assumption. The writer observed a severe illness in a boy of two and one-half years who had received toxin-antitoxin, (the product of a well known firm), and one year after was given a prophylactic dose of tetanus antitoxin, following injury from a rusty nail. His condition became so alarming that for a time, it was feared that he might not recover. He showed symptoms which his father, a neurologist, felt were due to edema of the brain. Isolated cases are not convincing, but Stewart³ reported the occurrence of severe reactions following the use of antisera in children who had been immunized with toxin-antitoxin, and he felt

that they were due to hypersensitivity induced by the horse serum in it. Gordon, Bernbaum and Sheffield⁴ reporting on the use of convalescent and antitoxic sera in the treatment of scarlet fever, stated that toxin-antitoxin sensitized a majority of persons to subsequent injections of horse serum. They noted that patients known to be sensitized developed serum reactions more frequently; 70 per cent of these had reactions of varying intensity. They made no mention of the severe types which are the subject of this paper.

Hooker⁷ investigated the problem of hypersensitivity induced by small doses of horse serum and his results were striking. Ninety-six individuals who gave negative skin tests for horse serum, and who had never before received any form of it, were given toxin-antitoxin. Six months later they were again tested for horse serum hypersensitivity, and 26 were positive, 36 gave a plus or minus reaction and 34 were negative. As a result of extended observations he concluded that, "a very noteworthy proportion of persons injected with horse serum becomes sensitized," and, in reference to toxin-antitoxin, "among the many hundreds of thousands thus treated, it is a conservative assumption that many tens of thousands become specifically allergic to horse serum." He referred to the observations of Cowie which indicated that children almost always developed hypersensitiveness after moderate sized doses of horse serum. Park⁹ confirmed Hooker's observations on the hypersensitivity induced by toxin-antitoxin, but felt that there was less likelihood of dangerous sensitization from the lesser amounts of horse serum contained in it than after the larger doses found in antidiphtheritic serum used for passive immunization. He felt that even in the latter case there need be no especial fear of reinjecting antitoxin. In a later article, Park¹⁰ was convinced that the cases described by Stewart³ were examples of severe serum sickness having little if anything to do with the previous injection of toxin-antitoxin. Stewart¹¹ has since recorded the history of a baby who had received three injections of toxin-antitoxin, and 14 months later an administration of diphtheria antitoxin because of a culture of diphtheria organisms obtained from the throat. In spite of a small desensitizing dose the patient had a very severe reaction, which it was difficult to think of as other than an instance of human anaphylaxis. He injected guinea pigs with toxin-antitoxin and later rein-

jected them with diphtheria antitoxin. Several of the animals died with symptoms typical of anaphylaxis. It must be granted that what will sensitize guinea pigs will not necessarily so affect human beings, as the former become readily sensitized and the latter with comparative difficulty. However, the results are suggestive and it would seem unlikely that all the severe reactions which he reported³ are explainable on the grounds of ordinary serum disease. The fact that individuals show a wide variation in their reaction to foreign serum has been commented upon by Mackenzie and Leake¹². Perhaps the small amount of horse serum in toxin-antitoxin may confer a high degree of hypersensitivity on some children, and in this group a subsequent injection may cause severe reactions.

It is accepted that hypersensitivity is more likely to develop, and to a greater degree, in persons who receive large amounts of horse serum, than in those receiving small amounts. Lorraine⁵ reported a patient who had received 8,000 units of antidiphtheritic serum and nine months later 10,000 units which were immediately followed by a severe reaction. In another instance a patient had received 6,000 units of antitoxin and seven months later 8,500 units. A severe reaction took place on the fourth day with symptoms suggestive of the early cardiac failure seen in diphtheria. Graham⁶ observed a severe reaction on the twelfth day after giving antistreptococcic serum, in which edema of the larynx and tongue, cyanosis and difficulty in breathing occurred. This patient had received antidiphtheritic serum 15 years before. Opinion varies as to how long hypersensitivity remains. Ker¹ gave a period of three years or longer; Mackenzie⁸ concluded that a high percentage of individuals became hypersensitive for eight to ten years after large amounts of serum; while Hooker⁷ showed that a hypersensitive condition might persist for as long as 17 years, and felt that in many individuals it probably lasted throughout life.

At this point it is well to differentiate between induced sensitivity and the natural type which some people exhibit who have never received horse serum. It is in those with such a high degree of natural sensitiveness that death after serum injection has usually occurred. This type of hypersensitivity differs in some respects from that under consideration, and has been placed by Coca¹³ in the category of allergy as distinct from anaphylaxis. Mc-

Callum¹⁴ reported a child who was given a prophylactic dose of antidiphtheric serum and died in five minutes; and Sumner¹⁵ a child eight years of age who died a few minutes after receiving a similar treatment. In this instance the patient had been subject to symptoms when driving behind horses.

Bauer and Wilmer¹⁶ studied the effect of toxin-antitoxin prepared in accordance with the technique of Park and his assistants of the New York Department of Public Health. In 150,000 children, most of them fully immunized, they observed no hypersensitivity as shown by skin tests, and when it was later necessary to give horse serum preparations to some of them, only one mild reaction occurred. In a recent article Spicer¹⁷ published observations on cases which had received antisera after some form of serum treatment or toxin-antitoxin, and noted, if any, only mild reactions. However, she stated that previous to treatment the patients were tested for horse serum sensitivity, and in those markedly positive the antitoxin was given in small divided doses at 15 minute intervals. It would hardly seem logical to judge the severity of serum reactions after the patient had been desensitized in this manner. The fact that no hypersensitivity could be demonstrated with the toxin-antitoxin used by Bauer and Wilmer, while with others a definite hypersensitivity arose as shown by skin tests and by severe serum reactions, leads one to suppose that some toxin-antitoxin mixtures are more likely to induce hypersensitivity than others. Whether or not this is true the writer cannot offer an opinion.

The desirability of replacing toxin-antitoxin which contains horse serum with one in which the antitoxin is prepared from another animal, or of using toxoid or the sodium ricinoleate preparations, is a question to be seriously considered. The absence of serum proteins in the latter two does much to commend them to us. In patients who have already been rendered hypersensitive by toxin-antitoxin or by antisera, and in whom it again becomes advisable to administer a horse serum preparation, desensitization should be done. The method was first introduced by Besredka and has been modified by different workers. In Ker's¹ experience, 0.5 c.c. of the serum followed in four hours by the therapeutic dose was sufficient for desensitization. Mackenzie¹⁸ considered such a procedure inadequate in many cases. He advocated skin testing to determine the pres-

ence of hypersensitivity, and then fractional dosage beginning with a very small amount and gradually working up over a period of hours to the required therapeutic amount. In less sensitive patients a shortening of the procedure was permissible if the first few injections produced no reaction.

It is true, when one considers the large number of patients receiving serum therapy, that severe reactions seldom occur and it may appear illogical to lay so much emphasis on them. But to the physician, who has had a really severe reaction occur in a patient in his private practice, it is a matter of importance. Such an experience cannot fail to militate against the use of serum preparations so far as the public is concerned, and may adversely affect the standing of the physician with his patient. It is most desirable, if possible, to adopt measures which will lessen the risk of severe serum reactions.

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LAMINECTOMY FOR SYMPTOMS OF SPINAL TUMOR WITH NEGATIVE FINDINGS

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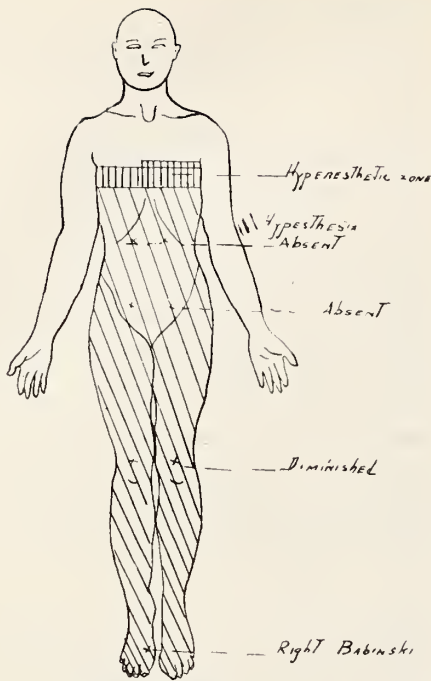
In the diagnosis of spinal cord tumors many pitfalls are presented. Because of these difficulties about 30 per cent of the cases which are operated with a diagnosis of tumor in or pressing on the cord have been proven wrong at the time of operation or autopsy. A study of these cases shows that the majority of those wrongly diagnosed belong to the group of multiple sclerosis, lateral sclerosis, infectious myelitis and pernicious anaemia and still they had shown enough objective and subjective signs to make advisable an operation for pressure upon the cord at a certain spinal segment. Some of them have shown typical Brown-Sequard paralysis, others suggested a transverse lesion and some only showed very early symptoms of fatigue followed by spasticity and paresis of a given muscle group, but in all when laminectomy was performed no evidence of a tumor mass could be found. If serous or adhesive leptomenigitis, pachymeningitis and arachnoiditis were found and adhesions were freed, the alleviation of symptoms is understood, but in the majority of these cases even such evidence of local disease was not present. Those autopsied showed no evidence of disease being present until the microscope was used.

1. Sachs and Glaser in a series of 140 laminectomies undertaken for very definite focal symptoms, found, in 33 cases, no signs of tumor when the spinal canal was opened and still after operation the majority of these cases had an absolute relief from symptoms.

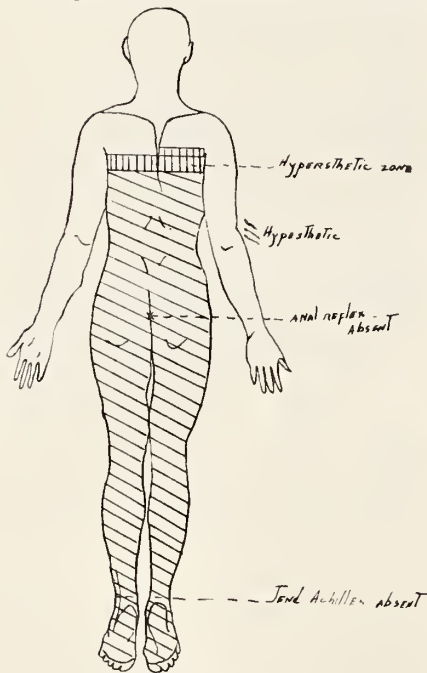
2. M. Keschner and W. Malamed in a series of cases which they reported in 1924 also showed that in a large number of cases in which laminectomy had been performed with absolute clinical diagnosis of cord tumor that multiple sclerosis was the post-operative diagnosis.

3. Stookey has reported a series of cases of adhesive spinal arachnoiditis simulating spinal cord tumor which after operation showed complete recovery and his paper has been supplemented by remarks of Goodhard and Riley who have made the same observation.

Case No. 1. (Plates 1 and 2)—Admitted December, 1926. Stenographer. Age 23 years. Single. Female. Jewish. Weight 110 pounds. Complained of sharp pains and numbness in



Case 1, Plate 1
Neur. Diagram. Note symptoms of transverse level lesion.



Case 1, Plate 2

various parts of the body, inability to urinate and to use her legs.

Had influenza in 1918 with good recovery. In 1923 patient was in an automobile accident at which time she sustained severe injury to the scalp with lacerations but no fracture of skull or back.

In October, 1926, she complained of shooting pains in the left shoulder blade and numbness and peculiar sensations in various parts of the body and especially the anterior aspect of the left leg. These symptoms persisted for a week then patient returned to her work. In November her symptoms became progressively worse so that she could not sleep. Difficulty in urination was present since onset. About December 14th she

developed numbness in the right leg and noticed that she could not move the toes of the left foot. Four days later she could not move right leg at all and this progressed to immobility of both feet so that she could not walk.

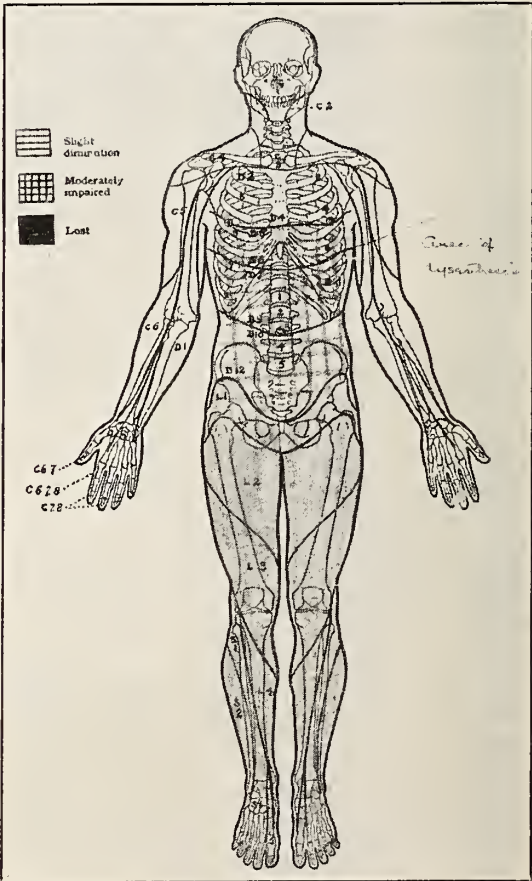
Physical examination showed no special findings.

Laboratory findings were negative with the exception of X-ray films after lipiodol injection which showed the lipiodol to stop progress at the level of the 8th and 9th dorsal vertebrae. Spinal fluid was negative.

Summary of Neurological Findings:

- Absent right plantar reflex.
- Inability to move her legs.
- Hyperaesthesia from 5th dorsal vertebra down.
- Beginning bed sore.
- Absent heat sense from the 5th intercostal nerve down to the iliac crest.
- Diminished heat sense in left leg which is absent in left ankle and foot. Heat is present in right leg to iliac crest.
- Lipiodol does not pass beyond the level of the 8th and 9th dorsal vertebrae. Slight paraesthesias of right hand were complained of but could not be substantiated by our findings, but spoke perhaps against the diagnosis of tumor at the level of the third thoracic vertebra.

Laminectomy of 3rd to 7th dorsal vertebrae was performed on January 3, 1927. The lower laminae are opened because of the lipiodol not ascending above the 6th dorsal. Dural sac opened the whole extent of laminectomy. The arachnoid is filled with fluid and contains many white patches 1 to



2 m.m. in diameter. The arachnoid looks blistered throughout. Cord rather sclerotic without any localization of a tumor. The view was good and there was nowhere a suggestion of an anterior tumor. Dura closed tight with running catgut. Closed tight: two layers of catgut for muscles and fascia; four through and through waxed silk. Continuous linen for skin closed the whole wound tight. Cause of lipiodol defect in filling was not verified by operation.

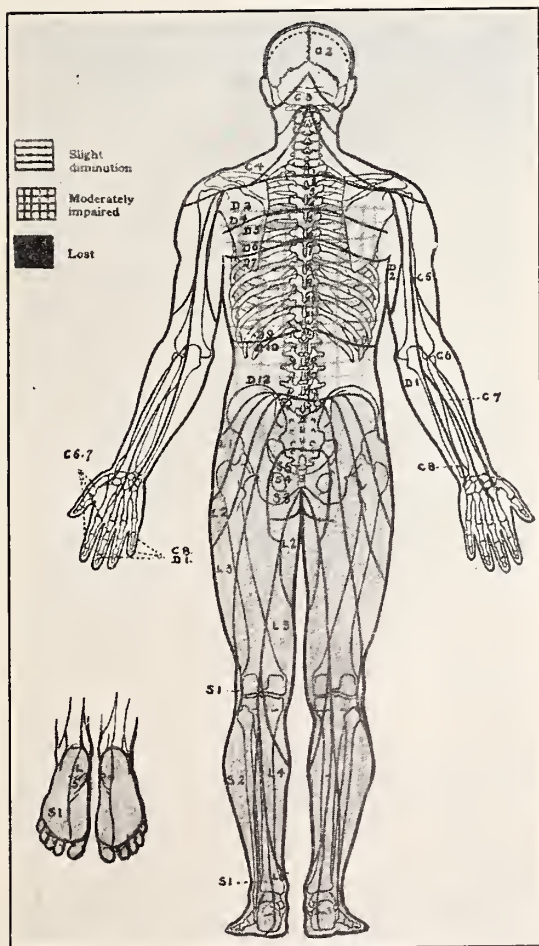
Since the operation patient has improved very much. She still has slightly exaggerated reflexes but is able to walk and her incontinence of urine is gradually disappearing.

Although the combined neurological findings plus the X-ray diagnosis by use of lipiodol gave an absolute diagnosis of tumor on this patient, operation showed that no tumor was present. From the operation one would expect this condition to be a low grade leptomeningitis plus a myelitis. This condition is not uncommon and in a large number of cases the end results following operation have been improvement in their symptoms.

Case No. 2. (Plates 1 and 2)—First seen February 12, 1925. Stenographer. Age 23 years. Single. Female. Jewish. Weight 112 pounds.

Complained of stiffness of both knees and left ankle, swelling of left ankle, stumbling and extension of great toes.

Had tonsillectomy in September, 1924, following the onset of present illness. Otherwise her family and past history showed nothing of importance.



Case 2, Plate 2
Temperature and pain.

Patient states the present condition started definitely June 15, 1924. She was getting out of an automobile and encountered severe pain in her left ankle. She thought she had sprained her ankle and limped for several weeks attaching no importance to her condition. Two months later her left knee again became impaired and she noted that it would stiffen up at times—contract in the morning and loosen up after use. The right knee became involved shortly afterwards. There has been a vague sense of numbness in both legs, but no pain.

In the last few weeks patient has complained of stumbling. Has had no difficulty with her work (stenography) and no suggestion of urinary disturbance. She is very keen mentally and complains of no pain or tenderness over spinal column. Best weight 120 pounds, present 112.

Usual general examination showed nothing of importance in reference to her complaint.

Laboratory findings were normal, with the exception that after spinal puncture patient became paralyzed from the waist down.

Summary of Neurological Findings:

Bilateral temporal pallor of discs.

Right facial weakness.

Slight tremor of lips and tongue.

Definite increase of elbow jerks.

Occasional incoordination in finger-to-nose test.

Absence of skin reflexes.

Bilateral Babinski and ankle clonus.

Exaggerated knee jerks.

Diminution of vibratory sense in right leg, less so in left.

Moderate hipalgnesia up to level of 5th and 6th dorsals, both in front and rear.

Paralysis from the 10th dorsal down following lumbar puncture.

Patient was seen by Dr. Max Ballin and Dr. Robert Moehlig, who diagnosed, because of eye and facial findings, case to be multiple sclerosis. She was also seen by Dr. Carl D. Camp of Ann Arbor, whose examination resulted in a diagnosis of tumor in the region of the 10th dorsal or probably a little higher up. Patient was then seen by Dr. Hugh Patrick of Chicago, who said his diagnosis lay between tumor and multiple sclerosis and advised further observation. After having seen Dr. Patrick she saw another doctor in Chicago who performed a lumbar puncture, following which she became paralyzed from the waist down.

In view of the above findings, even though there were many signs and symptoms of multiple sclerosis present following lumbar puncture, we decided that patient had a spinal cord tumor, and she was taken to see Dr. Frazier of Philadelphia, where she was operated upon, and his report is as follows: "At the exploratory examination we were unable to find anything suggesting intramedullary tumor. We rather came to the conclusion, by process of exclusion, that the tumor must be intramedullary. The operation was performed about two weeks ago, the wound healed by first intention and the patient is now ready to get out of bed. Our findings placed the tumor at the level of the third thoracic segment, but the exploration covered a wider territory than that both above and below." A few weeks later he wrote, "after repeated examinations there seemed to be no question as to the precise level of the lesion, but at the operation we did not find any extramedullary tumor, or anything to account for the symptoms without the cord but in the spinal canal. By process of exclusion I was

therefore forced to the opinion that the patient must have an intramedullary tumor."

Patient has been seen off and on by me since her operation. When she first returned to Detroit from Philadelphia she was absolutely confined to bed and could not move her arms or legs. She had increased reflexes—biceps, triceps, knee jerks, achilles—plus bilateral Babinski. In fact, her feet were in a constant extension. She was given massage treatments and gradually the use of her legs returned, and at the present time she is walking around with very little spasticity.

For a long time after operation this case was considered a case of tumor which had not been correctly localized. But as the signs and symptoms gradually improved the diagnosis of multiple sclerosis replaced that of tumor and at the present time we have decided the final diagnosis is that of multiple sclerosis.

Case No. 3.—Admitted first in March, 1917. Office clerk. Age 32 years. Single. Female. German.

Complained of numbness of soles of feet and right leg as far as the knee. This sensation of numbness was accompanied by cold and frequent pain especially in the right leg—duration altogether 8 years, girdle sensation about the waist with occasional pain—worse on the right side for 1½ years, and incontinence of urine and feces for 2 years.

Patient states the present illness began 8 or 9 years ago when she noted pains in her legs, spasmodic in character, and also had a feeling like tight garters above the knees which was constantly present. This pain was called neuritis and has been present ever since in spells. She says the band-like sensation about knees was occasionally accompanied by sensations of numbness and weakness. After walking legs feel as if an electric shock was passing through them from the waist to the knees. Following appendectomy and uterine suspension in February, 1919, she has complained of a girdle sensation which is always present around the waist and becomes worse when she walks or rides over rough roads. Rough carrying usually causes sharp pain in both sides of back and in abdomen. She often feels as if abdomen were "bloated." Since appendectomy, has had incontinence of urine and feces, which has become improved but never cured. Also since that time has been very unsteady on her feet when in the dark. Often she has sensation of extreme heat around her waist and knees. The soles of her feet feel thick. For the past 8 years has had occasional neuritic pain in right arm—sometimes in the left but these disappeared in August, 1917. She has never been confined to bed except during her operation, but has been unable to work the past year on account of being exhausted. She was seen again in the hospital in January, March and April, 1919.

The usual general physical examination showed nothing of importance in reference to her complaint.

Laboratory findings, including X-ray and spinal fluid were normal.

Summary of Neurological Findings:

Irregular pupils.

Slight atrophy of both leg muscles.

Exaggerated knee reflexes and slight clonus.

Marked Romberg swaying to the left each time.

Change of sensation.

No heat sense—just cold over knees and legs.

Girdle sensation around waist.

Bilateral Babinski and Chaddock's.

Absent abdominal reflexes.

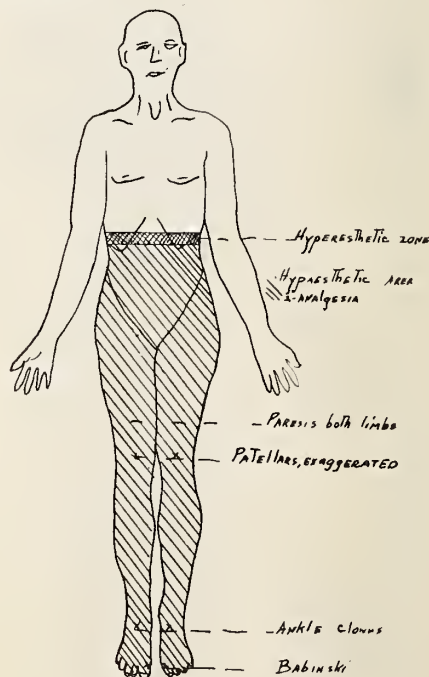
Ataxic gait.

Evidence of a lesion in the region of the 1st and 2nd lumbar vertebrae. As all of the neurological findings pointed to a lesion in the lower segments of the spinal cord a provisional diagnosis of tumor in the region of the 9th dorsal to 1st lumbar segment was made, and patient was referred for laminectomy. Operation was performed April 18, 1919: Flap from the 7th dorsal to 2nd lumbar vertebrae, spinous processes of 8th, 9th, 10th and 11th dorsal vertebrae were removed, making a corresponding wide laminectomy. The dura opened fluid escapes normally, leptomeningia below 10th lamina showed four white patches, the largest of them ¼ cm. in diameter (chronic leptomeningitis with calcareous deposits). This process is limited to the area mentioned, cord is exposed for two inches higher up and does not show similar changes. The cord is displaced, anterior part inspected. Palpation, downward and upward, reveal no tumor. The area of the arachnoid carrying the white patches is excised. The dura sutured by continuous catgut, muscles in two layers by interrupted catgut. Interrupted linen for skin.

After the operation the patient improved very much.

This case presents a long known problem in spinal operative therapeutics. Pachymeningitis, leptomeningitis and arachnoiditis gives signs and symptoms which often cannot be differentiated from those of tumor. It is only when the spinal canal has been opened that the diagnosis is established. It is a well known fact that in a large percentage of these cases after operative therapeutics the patient makes an almost complete convalescence and shows definite relief of symptoms.

Case No. 4. (Plates 1 and 2)—Admitted January 26, 1914. Cook. Age 44 years. Widow. Female. Hungarian.

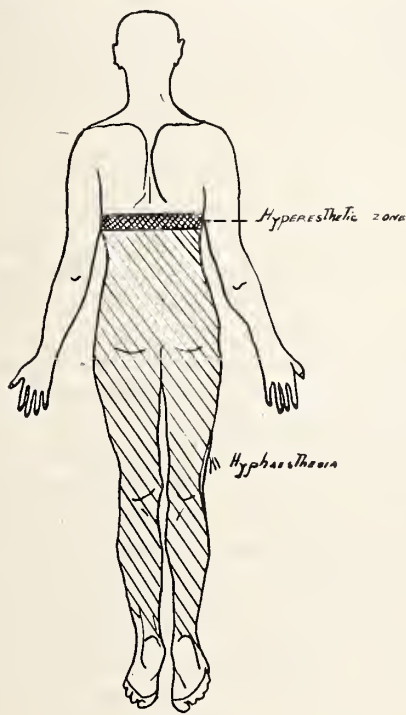


Case 4, Plate 1

Complained of weakness of both angles of 3 to 4 weeks' duration. This weakness progressed rapidly and then extended throughout both lower limbs so that the patient was unable to stand or walk unless supported. Also had a sen-

sation as if "ants were crawling up her legs." Complained of difficulty in walking and difficulty in using her hands, arms and shoulders. She said that people say her eyes are different. Other history is negative.

The usual physical examination showed nothing of importance.



Case 4, Plate 2

Laboratory findings, including X-ray and spinal fluid examinations, were negative.

Summary of Neurological Findings:

- Left pupil greater than right.
- Exaggerated bilateral knee reflexes.
- Doubtful Babinski—later present.
- Marked Romberg.
- Loss of motor power in both legs.
- Impaired sensation of both legs.

From the neurological findings a diagnosis of tumor in the lower portion of the spinal cord was made, and July 12, 1915, laminectomy of the 10th and 11th thoracic vertebrae was performed. No evidence of tumor was present. Veins of pia were greatly enlarged and injected. Marked adhesions between dura and pia. Cord adherent to dura. Definite area of leptomeningitis with increased pressure upon the cord by fluid. Adhesions were freed and wound closed.

Patient was observed for a long time following operation and she improved very much. Her areas of hyperaesthesia disappeared and she became able to walk a little.

This case is similar to Case No. 1, and it also shows that the surgical treatment of these cases alleviates many of the symptoms and restores the motor use. The latter alone makes operation advisable in the majority of cases.

In all the above cases as well as those which have been reported in the literature, there were a few signs which suggested disease above the level of tumor diagnosis

which resulted in laminectomy. In these cases which are reported one case showed tremor of the tongue and pallor of the discs, another showed irregularity of the pupils and peculiar sensations of the arm, and another case first complained of pain in the shoulders. These findings suggested in our early diagnosis of the cases something other than tumor, but the signs and symptoms of tumor were so outstanding in all of these cases that we believed an exploratory laminectomy was justified in doubtful diagnosis. The danger from operation as to life or function is smaller and the results offered even with negative findings are very good. Therefore, we have come to the following conclusions:

Our inability to make absolute spinal diagnosis even with modern diagnostic apparatus and tests, is not infallible.

In the large series which has been reported, about one-third have proved to be other than tumor.

Those cases which are usually mistaken lie in the class of multiple sclerosis, lateral sclerosis, septic myelitis and pernicious anaemia.

That laminectomy, either by changing the spinal cord pressure or by exposing the coverings to the air, seems to have a good effect on multiple and lateral sclerosis. Also it enables the operator to cut adhesions and remove plaques of lepto and pachymeningitis, respectively, and to obtain a resulting cure.

That the amount of harm done by laminectomy is nothing as compared to the good results obtained.

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A JOURNEY TO SOVIET RUSSIA

LEO DRETZKA, M. D.

DETROIT, MICHIGAN

As I had visited the principle clinics of Europe and Great Britain, my visit to Russia was planned for the purpose of studying progress in ways and means to health, in a country entirely new to me. The red tape involved in getting ready to start for the Soviet republic is incredible. One-half of my time, originally set aside for this work, was consumed in combatting the complete indifference of the Slavic temperament to speed in issuing passports. Judging from my experience, Soviet Russia decidedly is not catering to tourist trade. After an unfruitful attempt at securing a Russian visa in Paris, and upon being informed from Berlin that my personal appearance at the embassy there was necessary before I could have my visa, I proceeded to Berlin. The American habit of getting things done in a rush made it especially difficult for me to keep my poise during the ten days that followed my arrival in Berlin. After calling at the grim quarters of the Russian embassy at No. 7 Unter Der Linden every day for ten days, and several times each day, I was strongly tempted to let Soviet Russia struggle along without a personal inspection, and I intimated as much to the embassy's pale young woman secretary and the harassed Charge d' Affaires, neither of whom seemed to be moved by that possibility.

I was only one member of a group of regulars trying to get to Russia, all of whom, including myself, soon lost in these hauntings of the embassy what enthusiasm we may have had at the start for a visit to the U. S. S. R. Mr. Frederick Kuh, Berlin director of the International News Service, explained to me that I was now dealing with the mental processes of the eastern world. There was no reason, within Russian comprehension, why one American medical man should not wait twelve days or twelve months for his visa. But at last the long-planned trip to Russia was a reality. Waiting for the Moscow plane to leave Templehof field in Berlin is, to an American, like an experience out of one of Mr. H. G. Wells novels dealing with an imaginary era in the future. In spite of the Wright Brothers, Lindberg, and Ford, aviation in our country is still in swaddling clothes.

The great Templehof field is set off by a blaze of lights; dazzling beacons at the four corners. And sections of the tube

lights, so popular in the United States for street signs, outline the great rectangle along the ground. There is a casino, music, excellent food and drinks: a theatrical atmosphere of festivity. Thirty-six planes leave this field every twenty-four hours. An air mileage of 36,000 miles a day is run up by commercial planes on regular runs out of Berlin, and it is worthy of note that in three years not a single passenger has been killed.

VOYAGE BY AEROPLANE

At 11 o'clock at night the Moscow plane roared into view. Automatic flare lights on its wings were ignited an instant before its wheels touched the earth. As it came to a standstill, porters rushed out to stow our baggage. A few minutes later, and the city was sinking beneath us as we bored into the shadowy sky. A Russian, an American, a German and myself, an American, comprised the passenger list. Five hours later we arrived in Koenigsburg, the German-Russian border, where we alighted for lunch at the flying field cafe. Our repast of kippered herring, rye bread, and Pilsener was enlivened with a polyglot conversation, mostly in signs, of our respective impressions. A few hours later brought us to Riga, where we were treated to a beverage novel to me: Russian tea sweetened with strawberry jam.

MOSCOW AFTER 16 HOURS IN THE AIR

We arrived in Moscow at 4 o'clock of the afternoon of July 30th, sixteen hours after leaving Templehof field in Berlin, a distance of 1,700 miles. Three days are required for this journey by rail. The airplane fare from Berlin to Moscow is \$75.00 twice the amount of a first-class railway fare. This ratio holds true over most of Europe. I was met in Moscow by Mr. Grower of the American Jewish Joint Distribution Committee, an organization supplying relief to Jewish peasants in Russia, through the generosity of Americans. Mr. David A. Brown, of Detroit, who is chairman of this organization, had arranged this contact for me with the "Argo-Joint," as the organization is called, and I found this introduction most valuable. I was taken in charge, immediately upon my arrival, by the Soviet government. This was no special honor, as every person entering Russia goes through the same process. I was subjected to the same searching examination as a neutral tourist would be entering a belligerent country.

Among my luggage were two books: Trotsky's "Review of the Soviet Union,"

and Upton Sinclair's "Oil". Mr. Trotsky now being in disfavor, his book received a scowl of disapproval. While the look of pleasant recognition given the Sinclair book indicated the high favor in which this American radical is held in Russia.

I was pre-emptorily assigned to the Savoy Hotel by the Soviet Hotel Commission, where I was greeted by a porter speaking good English. He had lived in San Francisco and wished he was back there. A young Russian attorney was furnished me as a guide by the Society of Cultural Relations, at \$8.00 per day. He accompanied me in my visits to the clinics, hospitals or nursing homes, and, fortunately, ordered my meals for me.

My first venture out upon the streets of Moscow, where the workingman in cap and blouse, and the workingwoman in sombre black dress and head shawl, are literally the only people encountered by the tourist, was accompanied by a desire to be a little less well-to-do looking. I soon realized, however, that these workers were too absorbed in the serious business of life to be concerned with the get-up of a passing stranger. And the stranger is overwhelmed with a profound sadness for the lot of these people who have not only suffered the world war, but two revolutions within their own country, and the continued political ostracism of practically the entire world.

In spite of these handicaps, their hospitals and their clinics are as modern in equipment and as advanced in scientific research as any in our own country. Medical research is given a free hand in Soviet Russia. Day nurseries for the care of children and workingwomen are a part of all industrial plants and office buildings. For, since the home, as we know it, based upon the domestic function of women, is a discarded institution in Soviet Russia, women take an almost equal part with men in industry and commerce. Women are given leisure, with full wages paid, two months before and two months after childbirth.

COMBAT INFANT MORTALITY

The terrifically high infant mortality rate under the old Tzarist regime is being combatted by the Soviets with every known scientific method. Woman is instructed in every detail of hygiene for herself and her child. The baby in the day nursery receives expert care, of a kind that would receive the fullest approval of the most advanced American pediatricists. And as the children grow older they are

taught scientifically to care for themselves. It is one of the inspiring sights of Soviet Russia to see these scores of youngsters dressing or undressing themselves, eating, playing, or sleeping whilst their mothers are at work.

At the Society for the Protection of Motherhood and Childhood there is a public exhibit of wax figures illustrating every aspect of maternity, before and after childbirth, and so lucidly and simply presented as to impress itself on the most primitive, untutored mind.

There is an extensive social follow-up system for the mother and child after leaving the hospital. Bear in mind that although such a system for the service of our indigent population has been in effect in America for many years, in Russia it did not exist until the Soviet government inaugurated its cultural campaign, and this service in Russia extends to all women.

Abuses, of which every new regulation brings its quota, find no exception to the rule in Russia. Abortions being legalized and free of charge in the Soviet republic, it was inevitable that the government should find it necessary now to combat the prevalence of the abuse of this regulation. In Moscow alone there were 32,000 performed last year. (Incidentally there were no deaths to the mother as a result.

CHILDBIRTH NO STIGMA

There is no expense attached to giving birth to a child in Soviet Russia. Neither is there any disgrace attached to giving birth to an illegitimate child there. Since the persecution of the mothers of illegitimate children has never, in this country or any other, prevented the birth of illegitimate children, Russia does not inflict them with the added handicap of disgrace and ostracism.

All of these women are cared for in obstetrical hospitals. There are several of these hospitals in various sections of the city. Whereas before the revolution 95 per cent of Russian babies were born in the home, now 95 per cent are born in these hospitals. For unless a prospective mother submits herself to the scientific control of birth in one of these institutions, she will forfeit her privilege of collecting social insurance, to which all mothers are entitled.

MARRIAGE AND DIVORCE

Marriage in Soviet Russia is purely a civil matter, and is entered into with but slight formality. Divorce is equally free

and easy. I was unable to obtain exact statistics on the divorce rate, but I venture to say it does not greatly exceed our own high rate. The Soviet desiring above all an intelligent adjustment of this most important thing, and finding their earlier liberal laws subject to ordinary human abuse, are being forced to make other rulings more conservative than the first, yet designed to function liberally wherever deserved.

INDUSTRIAL MEDICINE

In Soviet Russia especial emphasis is laid on the problem of occupational diseases, and the Moscow Institute is a unique establishment for the study of these diseases. Doctors attached to this institute have the privilege of visiting the various factories to examine laborers before the working hour, during the working hour, and at the end of the working day. The study of fatigue is carried on exhaustively. Charts with the pathology and symptoms of industrial poisoning are posted in the factories, and the district doctors are acquainted with the most modern treatment for these industrial diseases.

Night sanitariums admit workingmen who are not incapacitated for work, but who require medical supervision. At the end of the working day, about 5 o'clock in the afternoon, these patients are admitted, and after taking a shower bath, which is compulsory, they don hospital robes, and are under strict regimen as to diet, medication, etc. Diabetes, closed tuberculosis, occupational diseases, and many chronic conditions are treated in these sanitariums. Diet dining rooms are maintained in connection with big industrial plants.

CRIME AND CRIMINALS

The Institute for the Study of Crime and Criminals carries on a systematic endeavor to get at the causes of criminality. Medical men are in charge, using as their laboratory a monastery of the old regime, and in the cells where devout monks once meditated, outlaws are now quartered. They are subjected to intensive observation, are kept employed, are given vacations on parole. Various types are classified, motives are searched into. In some cases the scientists advise the courts to modify sentences, to lessen them, or to lengthen them, as the case may require. The venture is fundamentally an experiment.

Of course, the whole of the Communist system must be regarded as an experiment. The only prophecy I shall venture to make is that the world is certain to derive a measure of benefit from the large

scale cultural medical work that is being carried on in Soviet Russia. It must be remembered that doctors were detached from the industrial class that brought about the revolution. They are making the most of the situation, and the fine fervor they show in laboring without hope of individual gain, other than their government salaries and the satisfaction of ministering to suffering humanity, is a splendid commentary on the spirit of the medical profession of Soviet Russia.

Leningrad is in sharp contrast to Moscow. While the average citizen of Leningrad presents the same poorly dressed appearance (and incidentally the Russian carries his poverty and his patches with a grace and a dignity as only a Russian can) the external aspect of this former City of the Tzars, lying at the mouth of the Neva, with its beautiful harbor, its wide thoroughfares, and its splendid palaces, evokes for the tourist a ready vision of former imperial splendor. Many of these palaces of the now exiled aristocrats are the rest homes of laboring men, where one can see them at their pastimes; frequently the erstwhile mistress of the house gazes down from her portrait on the wall at these peasants spending the week end in her former home.

PLACING THE BLAME

"Nothing is more discouraging nor depressing to the honest, careful and thorough physician than to encounter cases of malignant disease or late syphilis when they are to all intents and purposes hopeless and to realize that this might have been avoided if only the patient had applied for aid at a propitious time, and to realize, further, that his reason for not doing so was because of a belief, for example, that as taught by a popular 'physical culture' magazine, syphilis is curable by a milk diet, or cancer by a diet or by 'cancer pastes.'"

"We may rail at or regret the ignorance of the patient, but are we doing all in our power to dispel it?"

"Consider the patient, trudging from office to office accumulating such diagnoses as 'thin blood', 'thick blood', 'sluggish liver', 'stomach full of gas', various 'conditions', and so on and so on; consuming for their relief vast quantities of remedies often based upon, if not originating in, the 'literature' furnished by the assiduous 'detail man.'"

"Is there any significance in the fact that far too many patients see no incongruity in the fact that he may tell his story—briefly—advance his opinion as to what is the matter with him, stick out his tongue, have his pulse felt and in the next minute hear the diagnosis? Is it any wonder that, his innate belief in the omniscience of the doctor thus bulwarked by a concrete experience, he later receives with equal faith the pronouncement of the quack or the charlatan?"—Dr. Robert A. Kilduffe in the *Journal of the Medical Society of New Jersey*.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner*

BIOLOGIC PRODUCTS DIVISION

(Concluding the narrative portion of the biennial report of the Bureau of Laboratories begun in the October issue)

"Prior to 1921 the State of Michigan had no uniform method of distributing diphtheria antitoxin and other biological products for the treatment and prevention of communicable diseases. Act 146, Public Acts of 1879, provided for free vaccination at the expense of the city, village and township, and for the distribution of diphtheria antitoxin to indigents under the poor laws. As a result, small government units often delayed the administration of antitoxin, impairing the efficiency of that which was used. Some cities in the state kept a supply of diphtheria antitoxin and smallpox vaccine for free distribution, assuming that everybody was indigent; other villages and cities required proof of indigency. A large group of cities and probably the greater portion of the state depended upon the local druggists as a source of supply of biological products. In many instances the druggist carried the expense himself as the boards of supervisors often failed to approve the accounts for payment.

"In 1921 the situation was so serious that the Legislature passed Act 370 which provided for the purchase and manufacture, by the Commissioner of Health, of biological products for the prevention and treatment of diphtheria. This Act went into effect January 1, 1922. The Administrative Board ruled that as long as antitoxin could be purchased for less than the cost of manufacturing, the appropriation for the building of the plant should not be used. Consequently, bids were received and contracts let for the furnishing of diphtheria antitoxin, toxin-antitoxin mixture and Schick test material. These products were distributed free through authorized druggists, the druggists receiving no compensation. The plan was readily approved by the Druggists' Association for the reason that the products were being carried at a loss, due to the failure of collections. The first contract was let to H. K. Mulford Company and the U. S. Standard Products Company as follows

Diphtheria Antitoxin	1,000 units.....	\$.22	per pkg.
Diphtheria Antitoxin	5,000 units.....	.54½	per pkg.
Diphtheria Antitoxin	10,000 units.....	.91	per pkg.
Diphtheria Antitoxin	20,000 units.....	1.95	per pkg.
Toxin Antitoxin	.....	.04	per c.c.
Schick test material	.....	.15	per pkg.

"These amazingly low prices were possible because of the overstock in the biological houses following the World War.

"The next contract was let in 1923 at the following prices:

Diphtheria Antitoxin	1,000 units.....	\$.095	(Gilliland)
Diphtheria Antitoxin	5,000 units.....	.285	(Gilliland)
Diphtheria Antitoxin	10,000 units.....	.475	(Gilliland)
Diphtheria Antitoxin	20,000 units.....	.855	(Gilliland)
Toxin Antitoxin	per c.c. ....	.022	(Squibbs)
Schick test material	per pkg.....	.375	(Mulford)

"The next contract was let in 1925 at the following prices:

Diphtheria Antitoxin	1,000 units..\$.38	per pkg. (Gilliland)
Diphtheria Antitoxin	5,000 units..	.91 per pkg. (Gilliland)
Diphtheria Antitoxin	10,000 units..	1.58 per pkg. (Gilliland)
Diphtheria Antitoxin	20,000 units..	2.91 per pkg. (Gilliland)
Toxin Antitoxin	.....	.38 per c.c. (Park Davis)
Schick test material	.....	.66 per pkg. (Park Davis)

"It was quite obvious from these prices that Biological houses had joined together and brought the price up to somewhere near their cost figures, as the low bidder, Gilliland, was over 300 per cent higher on some products than he had been two years before. Naturally, with this increase in price, it was the duty of the Commissioner of Health to manufacture diphtheria antitoxin.

"During the years 1923-24-25 the laboratory of the Michigan Department of Health had been manufacturing toxin-antitoxin mixture at a cost of \$.012 per cubic centimeter, and the contract price had been \$.038 per cubic centimeter, showing a net profit of something over \$16,000. With this background it was not difficult to develop the manufacture of diphtheria antitoxin. In 1925 the Administrative Board authorized the erection of a small structure on some state land, allotting 40 acres of this to the use of the State Department of Health for the pasture of horses and site of the plant.

"The plant was put into operation in the fall of 1925. We started the distribution of antitoxin in the summer of 1926. At the end of the first year of operation, June 30, 1927, we arrived at a point where we could accurately figure our costs. The costs which follow show those for both 1927 and 1928.

	1927	1928
Diphtheria Toxin, per liter.....	\$5.34	\$5.30
Schick test material, per pkg. ....	.28	.28 ¹ / ₂
Toxin Antitoxin—10 c.c., per c.c.....	.0107	.0105
—50 c.c., per c.c.....	.0091	.0092
Diphtheria Antitoxin 1,000 units, per pkg.....	.13	.14
10,000 units, per pkg.....	.66	.54
20,000 units, per pkg.....	1.29	.95
Scarlet Fever products:		
Dick test— 1 c.c., per c.c.....	.044	.088
—10 c.c., per c.c.....	.00505	.0112
1st Imm. dose— 1 c.c., per c.c.....	.0509	.082
10 c.c., per c.c.....	.0073	.0154
50 c.c., per c.c.....	.0057	.....
2nd Imm. dose— 1 c.c., per c.c.....	.0507	.0173
10 c.c., per c.c.....	.0077	.0132
50 c.c., per c.c.....	.0057	.....
3rd Imm. dose— 1 c.c., per c.c.....	.0566	.077
10 c.c., per c.c.....	.0136	.0175
50 c.c., per c.c.....	.0121	.....
Scarlet Fever Streptococcus Antitoxin (therapeutic dose) .....	.....	.285
Typhoid Vaccine— 1 c.c., per c.c.....	.0461	.047
10 c.c., per c.c.....	.015	.018
Silver Nitrate, per M. ampules.....	13.80	10.50
Media:		
	1927	1928
Bulk Media, per liter.....	\$.96	\$.95
Loeffler's, per tube.....	.026	.025
Egg Slants, per tube.....	.025	.....
Fermentation, per tube.....	.0119	.....
Infusion Slants, per tube.....	.01	.....
Sheep Cells, per c.c.....	.0125	.01225
Goat Cells, per c.c.....	.....	.01225
Rabbit Cells, per c.c.....	.09	.10
Guinea Pig Complement, per c.c.....	.157	.....
Normal Horse Serum, per c.c.....	.....	.007

"The net worth statement of the plant as arranged by the State Administrative Board accountant for June 30, 1927, and for June 30, 1928, follows:

July 1, 1927	
Assets—	
Permanent Assets	\$ 72,528.97
Building and Improvements.....	\$46,084.10
Machinery and Equipment.....	26,444.87
Products on hand and supplies.....	30,568.03
Total Assets	\$103,097.00
Value of Products Distributed during 1927.....	\$171,335.55
July 1, 1928	
Assets—	
Permanent Assets	\$ 79,635.42
Buildings and Improvements.....	\$51,190.10
Machinery and Equipment.....	28,445.32
Products on hand and supplies.....	66,089.69
Total Assets	\$145,725.11
Value of Products Distributed during 1928.....	\$154,438.96

"The appropriation for 1927 and 1928 carried sufficient funds to improve the plant and extend construction so that we can manufacture smallpox virus at practically no additional expense. This, of course, will cut the costs on all other products, as the overhead for research and investigation has been pro-rated back against each of the biological products that we now distribute.

"During the past year we have investigated the method of manufacture and are in production of scarlet fever products for active immunization and treatment. Numerous problems of applied immunology have been studied in the laboratory to determine their practicability. In addition

to this, we have studied the effect of sodium ricinoelate as a detoxifying agent, the manufacture and preparation of diphtheria toxoid, the Ramon method of standardization of toxin-antitoxin, the increase of production of antitoxin in the horse by means of inoculation of tapioca, and the study of washed and unwashed typhoid vaccine. Many other small problems, too numerous to mention, have been reviewed and decisions reached as to their practicability under our conditions. Necessarily, all of this work has been charged back to overhead.

"The Division of Biological Distribution has continued as it was started. We now have 438 distribution points where diphtheria antitoxin is available for immediate withdrawal by physicians. The other products on our list are sent out upon the request of physicians or health officers from the main office. Scarlet fever toxin for the treatment and prevention of scarlet fever is distributed under restrictions.

"The 1927 Legislature reviewed the work of the division and put its stamp of approval on the policy of the commissioner by passing House Bill No. 202, which reads as follows:

"Section 1. It shall be the duty of the State Commissioner of Health to manufacture and distribute throughout the State, antitoxin and other biological products for use in the control of communicable diseases. Said commissioner is hereby authorized to adopt rules and regulations governing such distribution. Subject to the rules and regulations so prescribed, health officers and health boards of the various counties, cities, villages and townships of the state may from time to time make requisitions on the State Commissioner of Health for such antitoxin and other products, which requisitions shall, if deemed reasonable and necessary, be honored in the order in which they are presented to said Commissioner.

"Section 2. The commissioner may purchase such number of animals as may be required, and may employ necessary labor and purchase supplies requisite for the manufacture and distribution of such products.

"Section 3. Act 370, Public Acts 1921, is hereby repealed."

PROSECUTION FOR FAILURE TO REPORT BIRTHS

On September 12th Judge Collins of the Circuit Court of Shiawassee county handed down a decision in the case of the State

versus Dr. G. L. Cramer of Owosso, for failure to report births, Dr. Cramer being found guilty and assessed a fine of \$50.00.

This is the second time that Dr. Cramer has been convicted of this offense.

The case was brought by direction of the State Department of Health after they had exhausted every possible effort to secure compliance with the law from Dr. Cramer. Constant complaints were being received from residents in that vicinity who had failed to receive their birth certificates and in all cases they indicated that Dr. Cramer was the attending physician. Dr. Cramer put the department in such an embarrassing position that no other course than prosecution was open.

The state was assisted in the prosecution by Henry Horrigan, Assistant Attorney General.

It is stated that Dr. Cramer is considering an appeal to the Supreme Court.

Work on the summer highway water survey was completed in August. In addition to testing supplies and posting those that proved safe, representatives of the Bureau of Engineering put up about 100 general warning signs bearing the words: "Caution—Drink Water Approved by the Michigan Department of Health." These were placed at intervals along the main trunk lines of the state and were designed to supplement and to call attention to the smaller signs marking the safe supplies. While intensive work has been done along the line of protecting drinking water used by motorists, and while the majority of Michigan supplies are safe, enough are dangerous to justify this general educational measure.

Taking the lead in eliminating sources of stream pollution due to sewage, the Bureau of Engineering has completed surveys of sewage disposal at the Branch Prison at Marquette and at the State Hospital at Newberry. Plans for both institutions will be submitted later. Surveys will also be made of other state institutions as a part of the general program of stream pollution prevention.

The contractor started work August 25 on the water supply and sewage disposal system at Camp Grayling. Extensive improvements and additions will be made, following the plans and specifications recently prepared by the Bureau of Engineering and approved by the War Department.

Orla E. McGuire, a graduate sanitary en-

gineer from the State University of Iowa, has recently been appointed on the staff of the Bureau of Engineering.

Miss Katherine Marden, Director of Laboratories at the City Department of Health of Hartford, Connecticut, stopped in the State Department Laboratories for ten days on her way home from summer school at the University of Michigan. Miss Marden was especially interested in the work in bacteriophage carried on by Dr. Newton Larkum, Immunologist on the Bureau of Laboratories staff.

Dr. Paris Mendenez of Paraguay, South America, has spent six weeks in the department laboratories, sent by the Rockefeller Foundation. Dr. Mendenez is chief of the National Institute of Parasitology and assistant professor of bacteriology at the School of Pharmacy at Asuncion.

Dr. Alfonso Castrajon of Mexico, also a Fellow of the Rockefeller Foundation, has completed a three weeks' observation period in the laboratories. Dr. Castrajon was, for a number of years, assistant in the Pasteur Institute at Paris.

CHILD HYGIENE ACTIVITIES

Dr. Rhoda Grace Hendrick has severed her connection with the Bureau of Child Hygiene and Public Health Nursing. Dr. Hendrick has been connected with the department since 1925, conducting women's classes in prenatal, infant and child care in the rural districts of Michigan.

Dr. Ida M. Alexander will continue the work carried on by Dr. Hendrick.

Ionia County has the services of Miss Sylvia Krejci who is conducting a demonstration prenatal nursing program under the supervision of the physicians of that county.

Sanilac and Montcalm counties are also having demonstration prenatal programs directed by the local physicians. Miss Emily Lyon, formerly with the Chicago Health Department, and now with the Bureau of Child Hygiene and Public Health Nursing, is working in Sanilac county for a period of at least three months. Miss Harriet Szymczak, formerly with the Clinic for Infant Feeding in Grand Rapids, is in Montcalm county for a limited time.

Women's classes are being conducted in Alpena county, and have just been completed in Marquette.

Little Mothers' League classes, teaching child care to girls, are being conducted in Alger, Benzie, Leelanau, Midland, and Isabella Counties by nurses on the staff of the Bureau of Child Hygiene and Public Health Nursing.

BIOLOGIC PRODUCTS

It costs the State of Michigan thousands of dollars a year to distribute biologic products free to physicians. Returns of unused, outdated products increased from 5 per cent for the fiscal year ended June 30, 1927, to 11 per cent for the year ended June 30, 1928. This was due to carelessness on the part of health officers and physicians in ordering more than they needed. The laboratory budget is so limited that it should not be asked to bear the burden of unnecessary waste.

Miss Frances Florer, doctor of jurisprudence, a graduate of the Law Department of the University of Michigan, has joined the staff of the Bureau of Laboratories as executive secretary.

VISITS OF ENGINEERS DURING THE MONTH OF SEPTEMBER, 1928

Inspections of Railroad Water Supplies: total 25.

Bay City 2	Port Hope
Dearborn	Saginaw
Detroit 18	Wyandotte
Flint	

Inspections and Conferences, Sewerage and Sewage Disposal: total 24.

Alma 4	Grayling 2
Alpena 2	Harbor Springs
Buchanan	Hart
Dowagiac	Hastings
Durand 5	Hillsdale
Elk Rapids 2	Plymouth 2
Grand Rapids	Traverse City 2

Inspections and Conferences, Water Supplies: total 22.

Baroda	Lapeer 3
Cassopolis 7	Marlette 4
Clawson 2	Niles 2
Grayling 2	South Haven

Inspections and Conferences, Stream Pollution: total 3.

Coldwater	Lansing
Elk Rapids	

Inspections and Conferences, Miscellaneous: total 15.

Coldwater, School Water Supply 5
Grand Rapids, Division Road Drain
Hastlett, Water Supply for School
Jefferson Beach, Nuisance
Kalamazoo, Sewage treatment for T. B. Hosp. near Kalamazoo
Okemos, Septic tank

Plymouth, Drain Nuisance 2
South Haven, Resort Inspection
St. Clair Shores, Drain Nuisance
Ten Mile Road, Nuisance

Institutions:

Eaton Rapids, V. F. W. Home, Survey—7½ days.

Grayling, Camp Grayling, Water and Sewers, full time of three men for entire month of September.

PREVALENCE OF DISEASE

	September Report			
	Cases Reported			
	August 1928	September 1928	September 1927	Av. 5 yrs.
Pneumonia	158	241	206	164
Tuberculosis	697	233	305	442
Typhoid Fever	70	61	74	125
Diphtheria	239	239	229	351
Whooping Cough	1,404	874	564	495
Scarlet Fever	264	322	343	410
Measles	185	75	50	115
Smallpox	50	36	55	65
Meningitis	17	17	8	8
Poliomyelitis	3	25	88	85
Syphilis	1,012	1,512	1,549	1,275
Gonorrhea	603	921	771	1,044
Chancroid	9	9	13	13

CONDENSED MONTHLY REPORT

Lansing Laboratory, Michigan Department of Health

September, 1928

	+	—	+—	Total
Throat Swabs for Diphtheria				1472
Diagnosis	29	198		
Release	89	599		
Carrier	23	505		
Virulence Tests	10	19		
Throat Swabs for Hemolytic Streptococci				739
Diagnosis	77	134		
Carrier	83	445		
Throat Swabs for Vincent's	17	210		227
Syphilis				7413
Kahn	1074	6292	42	
Wassermann		5		
Darkfield				
Examination for Gonococci	112	1190		1302
B. Tuberculosis				475
Sputum	87	350		
Animal Inoculations	2	36		
Typhoid				148
Feces	4	50		
Blood Cultures	3	35		
Widals	11	41		
Urine		4		
B. Abortus	4	53		57
Dysentery				51
Intestinal Parasites				21
Transudates and Exudates				239
Blood Examinations (not classified)				132
Urine Examinations (not classified)				502
Water and Sewage Examinations				1030
Milk Examinations				91
Toxicological Examinations				
Autogenous Vaccines				2
Supplementary Examinations				123
Unclassified Examinations				470
Total for the Month				14494
Cumulative Total (fiscal year)				41755
Increase over this month last year				2475
Outfits Mailed Out				18854
Media Manufactured, c. c.				111445
Typhoid Vaccine Distributed, c. c.				3392
Diphtheria Antitoxin Distributed, units				17222000
Diphtheria Toxin Antitoxin Distributed, c. c.				35150
Silver Nitrate Ampules Distributed				9572
Examinations Made by Houghton Laboratory				1310
Examinations Made by Grand Rapids Laboratory				5625

THE JOURNAL

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NOVEMBER, 1928

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

DR. HIRSCHMAN, PRESIDENT M.S.M.S.

Dr. Louis J. Hirschman has been elected president of the Michigan State Medical Society for the year 1928-29. It would certainly be out of place here to say that Dr. Hirschman is too well known to need any introduction. Everybody knows him. The following is no introduction. We have a habit of forgetting, however, the various vicissitudes and experiences of a lifetime, hence a re-counting of some of Dr. Hirschman's activities will not be out of place here. He was born on August 15th, 1878, at Republic in the Upper Peninsula where his father was one of the pioneers in practice. He was educated at the Detroit College of Medicine where he graduated in 1899. In June, 1904, he married Miss Carstens, daughter of the late Dr. J. H. Carstens, who bore an honored name in the state. Dr. Hirschman was House Physician of Harper Hospital, 1899-1900; Director of

Harper Hospital Clinic, 1904-1906; Professor and Head Department of Proctology, Detroit College of Medicine and Surgery, since 1906; Proctologist to the Women's Hospital, 1922; Consulting Proctologist to the Detroit Receiving Hospital and also to the Detroit Evangelical Deaconess Hospital. Dr. Hirschman has also a very credible war record in France, where he served with Base Hospital No. 17. At present he is commissioned Lieut.-Colonel, Med.—O. R. C. United States Army. He was editor of Harper Hospital Bulletin, 1906-10. He is known over the Anglo-Saxon world as author of a hand-book, Diseases of the Rectum, which has passed through several editions. Dr. Hirschman was co-author of the American Year Book of Anaesthesia, 1915-18. Among his professional society connections may be mentioned membership in the American Medical Association (ex-chairman section on Gastro-Enterology and Proctology; Michigan State Medical Society; Wayne County Medical Society (ex-president); Northern Tri-State Medical Society; American Proctological Society (ex-president); Detroit Medical Club (ex-president); Michigan Surgeons Club; Detroit Academy of Surgeons; Alumni Association Detroit College of Medicine (ex-president). In addition Dr. Hirschman had done his part in his various civic relations.

During Dr. Hirschman's professional career of nearly thirty years he has made hosts of friends both in the profession and among the laity. He has during these three decades found time for extensive travel, including a voyage around the world, all of which has made him a cosmopolite and broadened his outlook upon life.

IS THE COLON USELESS?

Archdeacon Paley a century ago declared that our list of "useless" structures in the human body decreases as our stock of knowledge increases. Incidentally it might be said that our list of idiopathic diseases decreases as our diagnostic acumen increases. There is still much to be learned of the function of some bodily structures. When we dismiss the subject by assuming certain organs to be vestigial or to be useless we shut off all further investigation. Near the end of the nineteenth century Metchnikoff claimed he had discovered many imperfections in the human body. In 1901 he maintained that man was being killed by his intestinal flora, that the colon was not only useless but a

menace to the rest of the body. Metchnikoff was not alone; other workers, notably Sir W. Arbuthnot Lane, held a similar view, namely, that the large intestine was a useless and dangerous structure.

* * *

Man's earliest occupation was hunting. The later agricultural stage made civilization possible. It is estimated that agriculture was practiced in Europe not earlier than 5000 years ago. Agriculture made it possible to produce and preserve the fruits of the field so that man became independent of seasonal variations in climate. The division of labor as an economic principle made it possible for large portions of the population to congregate to form towns and cities. City life is a comparatively new experiment for western civilization. The alimentary system, which was evolved to meet the needs of our primitive ancestors and served them for perhaps a hundred thousand years, has now to accommodate itself to a modern dietary. Sir Arthur Kieth* maintains that "beyond a doubt civilization is submitting the body to a vast and critical experiment. It is not only the alimentary system which is being subjected to new conditions; the boney and muscular framework of our bodies is also being subjected to novel stresses." The result is a breaking down of the supporting system manifested in such conditions as hernia or flat feet or vericosities. Undoubtedly many nervous manifestations are due to urbanization. City life and the automobile have done much to render sedentary the lives of a large portion of the population.

Many operations for removal of the colon have been performed since Metchnikoff's remarkable pronouncement. The fact that patients have survived these operations in apparent good health would seem to justify his conclusion. The great prevalence of constipation or colonic stasis, however, points to a disharmony between the colon and the modern diet.

* * *

Since Metchnikoff's time we have learned that the ferments and catalysts elaborated by plants for their own use serve the animal economy as vitamins. McCarrison and Cramer have shown how necessary such substances are for the proper functioning of the colon. The right portion of the colon is the organ of bacterial digestion; the left is the organ of excretion. The right is highly developed in those animals whose vegetable food is

rich in cellulose. It is much less developed in carnivorous animals. Man's position is intermediary. Bacterial action is of minor importance in man except for cellulose and carbohydrates. According to Cawadias the presence of lymphoid tissue in the right colon indicates that this organ possesses certain defensive action. Particularly is this likewise true of the appendix which this writer does not regard as vestigial.

Sir Arthur Kieth* goes on to say, "in the mucous membrane of the human great bowel, are embedded in a stratum of reticular tissue—of reticulo—endothelium—some 15 million of minute test tube glands—the glands of Lieberkuhn. No one who has noted the structure and setting of these glands and the fine changes which their cells undergo in the course of action, can believe their sole function is to supply lubricating fluid for the intestine; they have all the appearance of also supplying an internal secretion, and the evolutionary history of the colon favors such an inference." And he concludes that all things considered, the great bowel of man is not a useless or superfluous organ but one which we in our ignorance are maltreating.

RETURN OF THE WANDERERS

In the present number of the Journal we publish two or three articles on the impressions of some of our medical confreres who have spent the summer in Europe. Among the articles are "Medical Education in England, France and Germany," by Euripides Nittis, a student at the University of Berlin. Dr. Leo Dretzka of Detroit, who is a member of the Michigan State Board of Health, writes his impressions of a visit to Moscow and other European centers. "Some Observations in Otolaryngology at the Vienna Clinics," is the subject of an interesting paper by Dr. S. E. Barnett. We also anticipate papers from other contributors during the winter months. Dr. H. R. Carstens, who has covered western Europe in his automobile, promises a paper or two. Others who have been abroad, or who have had unusual experiences in travel, are invited to pass them on to our readers.

We are all of us more or less interested in travel, though some of us are destined to be more or less armchair travelers. Travel and history have a way of going hand in hand. H. G. Wells devised the idea of a time-machine which enabled one to travel backwards and forwards in time so that he could see what the past was like,

*Concerning Man's Origin.

*loc cit.

or what the future would be like. Bertrand Russell maintains that in travel we already have something which corresponds to this so-called time-machine, which we realize by going about the world. At the present day New York and Chicago are to Europeans the future; Asia is the past and India, particularly, is the Middle Ages. England or France would be less strange to George Washington if he were to return to earth than the United States of today, and George would have to go to China to find men who still believe in life, liberty and the pursuit of happiness.

After all, the United States, North America, in fact, is simply a westward extension of Europe. The civilization here is essentially a European civilization. Our medical science has been largely derived from Europe; in fact, we are all immigrants, or the sons of immigrants, whether our ancestry arrived on the Mayflower or the latest Trans-Atlantic steamship; hence our interest in things European.

CANCER OF THE BREAST

Breast cancer has constituted one of the most serious surgical problems for many years. It seems that the hope of the surgeon depends largely upon early detection coupled with absence of lymphatic involvement at the time of operation. In the treatment of this condition the surgeon has shown his willingness to make use of any other agent that showed any hope of a better result. Usually the other agent was X-ray post-operative treatment.

It is interesting to check up on results from time to time. Probably there is no place in the world which offers better facilities for the study of post-operative and roentgen-ray treated carcinoma of the breast than the Mayo Clinic. Recently a study of 1859 cases was made by Dr. Harrington of the Division of Surgery. In all cases the study was based on three year and five year results and results carried through to ten year periods. Of the patients operated on before metastases to the lymphnodes had taken place, twice as many lived three years, two and one-half times as many lived five years, and three and one-half times as many lived ten years.

This writer states that the X-ray has been used in the Mayo Clinic post-operatively in most cases since 1915 and was used in 1092 of 1859. An opportunity was afforded to compare the results of the X-ray treated cases with the end results of 767 cases in which the rays were not used. According to Dr. Harrington the

results show that of the patients who had had roentgen-ray treatment, 7 per cent more lived three years after operation and 4 per cent more lived five years. When the results were carried to ten years it was found that 3 per cent more patients were living who had not had roentgen-ray treatment. A similar comparison was then made of the cases in which primary radical amputation had been performed from 1915 to 1923. The results of roentgen-ray treatment in this group were even less uniform. In the cases in which roentgen-ray treatment was given, 3 per cent more patients lived three years after operation. The results were about the same in patients living five years. Of the patients who were living after ten years, 11 per cent were living who had not received roentgen-ray treatment. "My observation" quoting Harrington, "seems to show that roentgen-ray treatment has not been of great value as an auxiliary to operative treatment of these cases and indicates that roentgen-ray has little affect on malignant tissue which may remain following operation."

Nine hundred and fifty-three patients of the series are known to have died of metastasis. The site of metastatic lesions in order of frequency was as follows: (1) supra-clavicular region, (2) lungs and mediastinum, (3) abdomen, (4) spine, femur, pelvic bones, and skull, and (5) the opposite breast and axilla. The average length of life of all patients with metastasis who were treated by roentgen-ray was two years and three months. The average length of life of a similar group not receiving roentgen-ray treatment was three years and two months. These results, the author goes on to say, show the ineffectiveness of roentgen-ray in the treatment of metastatic or recurrent lesions in these cases and emphasizes the importance of complete removal of the diseased tissue at the time of operation.

THE BEST TIME TO LEARN

For the past year or so the Detroit Free Press has carried daily a very instructive as well as entertaining series of articles by C. J. Armstrong under the general heading "Life's Psychology." Psychology in the popular sense is a sort of meaningless drivel that is handed out by soft-voiced, bewhiskered lecturers in hotel parlors and lecture halls with the expressed purpose of insuring success in love, business and sundry other things dear to the human heart. This writer, however, does not savor of the bizarre. His interpretations of aca-

demic psychology appear sound. As an example under the above heading he discounts the old notion that the best time to learn is during the early years of one's life and maintains that there is no "best time." To quote from one of his recent brief articles:

"It has long been supposed that the best time to learn anything is during the early years of life. This notion about learning is a matter that needs modification. Perhaps this idea was easy to get because it fits well into the traditions of mass education. School days and learning are ordinarily taken to be one and the same. Or perhaps it is born of the doubtful truth that the mind is plastic in youth and becomes rigid with the passing years. So far as recent experiments can tell, there seems to be no one best time to learn. School days mean nothing. Plasticity is not an established fact. There is a lot of experimental evidence tending to show that an adult can learn a foreign language as readily as can the boy or girl in the teens.

"When is the best time to learn? The answer is very simple and definite. The best time to learn is the time when you want to learn. Necessity does a lot of dictating in all matters of learning. Age differences can be ignored for all practical purposes. You can learn almost anything when you want to. If this new knowledge about the best time to learn could somehow sink into the minds of the public, it might prevent a good many occupational failures. Up and down the country you will find many employers prematurely retiring good men because they are "too old to learn." The strange thing about it all is that employees themselves come to believe this mistaken notion. And so ambition is often cut off before it has a chance to try its metal."

If there is any "best time" to learn we would say it is when we have some definite purpose in learning and that time is usually later than the school period of our life—the period of mass education. All this is apropos of the movement in many states and particularly of the movement in this state in favor of graduate education in medicine.

THE LATE DR. GEORGE W. JONES

The death of Dr. George W. Jones of Inlay City occurred on October 1st in his ninetieth year. On February 18th a complimentary dinner was tendered the father

by one of his sons at which Dr. Jones read a very interesting paper giving an intimate account of his long career. His address which appeared in the April number of the Journal of the Michigan State Medical Society, is well worth re-reading. Dr. Jones was an honorary member of this Society. The address concluded with advice to the younger generation of physicians which we feel is apropos at this time.

"My experience has taught me a few valuable lessons. In the first place, I would advise all young physicians, especially, not to engage actively in party political affairs; there is nothing to be gained thereby, except worry and vexation of spirit. In the second place, I would advise against farming and fast horses. From my youth I have been a great lover of horses and for many years I engaged actively in breeding standard-bred driving horses, but with the advent of the automobile the horse business became unprofitable and I sustained heavy losses thereby. And I would advise against investing in all "get-rich-quick" schemes — most physicians are "easy marks"—they bite at everything presented to them. My advice to all young physicians is to give your undivided attention to your profession, free from all entangling, outside ventures. When you become rich or wish to retire, take up anything that your mature judgment approves of, as a fad or a sideline. I have always thought that a collegiate and classical education should be considered an essential pre-requisite before entering upon the study of medicine. Such studies develop every faculty of the mind and furnish a fitting foundation for his future medical course."

Dr. Jones was in active practice until near the end of his life and in the full possession of his mental powers. He had always maintained contact with his professional work, consequently never grew old in the intellectual sense. He lived a simple life devoid of affectation.

He scarce had need to doff his pride, or slough
the dross of earth;
E'en as he trod that day to God, so walked he
from his birth,
In simpleness and gentleness and honor and clean
mirth.

Beyond the loom of the last lone star, through
open darkness hurled
Farther than rebel comet dared or hiving star
swarm swirled,
Sits he with those that praise our God for that
they served His world.

EDITORIAL NOTES

X-ray service in the hospital will be limited to hospital patients so that the city institutions will not be in competition with private physicians.—Bulletin of the Genesee County Medical Society.

This is as it should be. Municipally owned institutions should not compete with those persons who are supporting them by taxation.

Professor J. J. Thomson, the noted British physicist has written a little book entitled, "Beyond the Electron," in which he dissects the electron itself. He considers the electron no longer the ultimate indivisible unit in the structure of matter. The infinitely little in matter calls to mind the old rhyme:

Little fleas have other fleas
Upon their backs to bite 'em,
And these in turn have other fleas
And so ad infinitum.

A great deal has been written especially in the lay press on the subject of expert testimony where the so-called medical expert usually comes in for his share of bantering criticism. The following from the New York Times is the best we have seen on the subject:

It is a bunch of experts,
To learning much inclined,
Who went to court to testify,
About a culprit's mind;
And this is what it came to,
Their findings all combined:

"The person here defendant,
To us it's very plain,
Is imbecile and lucid;
Irrational and sane.
In fact, he has a cracked and sound
Abnormal normal brain."

Then some retired to Newport
To luxury and ease,
And some went in for orchids,
And some went overseas;
For most of them were experts
In drawing handsome fees.

The cost of surgical operations varies with different localities. We invite the Michigan surgeon's attention to the cost of having a malignant growth removed in the state of Vermont. The following dialogue between two farmers is recorded by a Vermont doctor who overheard the conversation:

"I hear Bill's wife is dead."
"Yep."

"What did she die of?"

"Oh, some kind of tumor I b'lieve."

"Couldn't she ha' ben operated on?"

"Yes, I s'pose so, but they would haf to carry her forty miles tew a hospital an' Bill would have hed to sold a couple of cows to pay fer it an' so they jest didn't do it."

Fifty years ago the number of persons applying for admission to the Department of Medicine and Surgery, University of Michigan, was 210, all of whom were accepted as medical students. The present enrollment September, 1928, was confronted with 750 applicants of whom less than 150 have been accepted as freshmen. The Detroit College of Medicine and Surgery has enrolled 75 in the freshmen class. Several times this number applied for admission. There are fewer medical students today than twenty-five years ago with fewer students accepted in those schools, and on the whole the population of the United States has greatly increased; and yet there appears to be no scarcity of doctors. Draw your own conclusions.

OUR NEW PRESIDENT



—Photo by D. D. Spellman.

L. J. Hirschman, M. D.

President Michigan State Medical Society.

BEFORE THE DAYS OF SPECIALISTS

The Journal M.S.M.S. is indebted to Dr. W. J. Stapleton of Detroit, one of our members who has spent his vacation in England during August, for the following, which consists of the exact words of an old signboard preserved in a museum in Cornwall. We have enjoyed it and pass it on to our readers:

ROGER GILES

Surgin, Parish Clark and Sculemaster,
Groser and Hundertaker,

Respectfully informs ladys and gentlemen that he drors teef without waiting a minit, applies laches every hour, blisters on the lowest tarms, and vissicks for a penny a peace. He sells Gods-fathers kordales, kuts korns, bunyons, docters hosses, clips donkies wance a munth, and undertakes to look after everybody's naysls by the ear. Joseharpes, penny wissels, brass kanelsticks, fryin pans, and other moosical hinstruments hat greatly redooed figers. Young ladies and gentlemen larnes their grammur, and langedge in the purtiest mannar, also grate care taken off their morrels and spelling. Also zarm singing, tayching base vile, and all other sorts of fancy work, squadrils, pokers, weazels, and all country dances tort at home and abroad, at perfeksun Perfumery and snuf in all its branches. As times is cruel bad I beg to tell ee that i has just begunned to sell all sorts of stashonery, ware, cox, hens, voulds, pigs, and all other kind of poultry, blackin brishes, herrins, coles, scrubbin-brishes, traykel, and godley bukes and bibles, mise-traps, brick-dist, whisker seeds, morrel pokkerankechers, and all zorts of swatemaites including taters, sassages, ane other garden stuff, bakky, zizars, lamp oyle, tay kittles, and other intoxzikating likkers, a dale of fruit, hats, zongs, hair oyle, pattins, bukkit, grindin stones and other aitables, korne and bunyon zalve, and all hardware, I has laid in a large assortment of trype, dogs mate, lolipops, ginger beer, matches, and other pikkles, such as hepson salts, hoysters, Winsor sope, anzetrar—Old rags bort and sold heer and nowhere else, new laid eggs by me Roger Giles; zinging burdes keepped, such as howles, donkies, paykox, lobsters, crickets, also a stock of celebrated brayder.

P.S. — I taches geography, ritmitmetic, cowsticks, jimnastics, and other chynees tricks.

THE FATE OF THE RURAL DOCTOR

We take the liberty of reproducing the following letter which was written by a correspondent to the Illinois Medical Journal. The writer is a physician in a small town or village in the state of Illinois:

"The article in the August issue of the Journal from the 'National Grange' relative to the country doctor situation is interesting but does not place the blame where it belongs. The farmer is to blame. He has ceased to adequately support the country doctor and the basic reason for this is ease of transportation.

"I started practicing nearly thirty years ago in the horse and buggy age. In those days it ordinarily took two hours to go twelve miles. Nowadays the farmer in that community can drive fifty miles in the same length of time and he does. In that community today the local doctors get nothing but emergency cases and confinement and other work among the people who are too poor to get away. The confinements all go out of town, (if able) much of the surgery goes out without even consulting local men.

Whereas, the town used to support four or five doctors it is now able to support only two, and they are hard up. The people are still there, the sickness is still there but it is on wheels traveling to the big towns.

"The farmer has deserted the small town doctor, not the doctor the small town and the farmer.

"It is not specialization except in this respect that the farmer will get into his car and go to a specialist himself without even consulting the home doctor and an awful lot of them do."

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

DR. ANGUS McLEAN NAMED ON NATIONAL CANCER COMMITTEE

One of the most important as well as interesting sessions of the American Public Health Association, held in Chicago October 15th to 19th, was the special symposium on cancer. Among the speakers were Doctors Charles H. Mayo, J. C. Bloodgood, Hugh S. Cumming, W. C. MacCarty, Maude Slye and George Soper. A national committee was formed, the purpose of which is to co-ordinate and pass on some of the present methods of cancer treatment. The personnel of the proposed national committee is as follows: Doctors J. C. Bloodgood, Baltimore, Maryland; R. C. Coffey, Portland, Oregon; E. B. Coley, New York, New York; Leonard Freeman, Denver, Colorado; W. D. Haggard, Nashville, Tenn.; F. H. Lahey, Boston, Mass.; Otis Lamson, Seattle, Washington; N. J. MacLean, Winnipeg, Canada; U. Maes, New Orleans, La.; Angus McLean, Detroit, Mich.; James F. Percy, Los Angeles, Calif.; Emmett Rixford, San Francisco, Calif.; C. L. Starr, Toronto, Canada.

It is proposed in the clinics to try out such methods of treatment as colloidal gold, lead and other methods.

Members of the Oakland County Dental Society Wednesday, September 26, entertained the Oakland County Medical Society at an afternoon of golf, followed by dinner at Wise's golf course. Twenty-four dentists and 35 physicians enjoyed the afternoon and evening program.

Members of the Oakland County Bar association were hosts of the members of the Oakland County Medical Association at golf and dinner Wednesday afternoon and evening at the Aviation Country Club at Green Lake. Nearly 100 men attended, most of whom played golf in the afternoon. Ralph T. Keeling had the low score for the attorneys with a 91 and Dr. L. A. Farnham was low for the doctors with 93. They received prizes.

Dinner was served in the club house at 7 o'clock. James H. Lynch was toastmaster and during the program called on a large number of those present for informal talks.

Dr. Ralph L. Fisher has been appointed Chief of the Department of Internal Medicine at the Jefferson Clinic and Diagnostic Hospital.

MEDICO-SOCIAL AND ECONOMIC

Apropos of the recent Lapeer Home romance, featured in the Detroit Free Press, upon which I am asked to comment*: Infractions of statutory laws from both classes—the intelligent—and the ignorant. Examples may be found in those dealing with prohibition and with prostitution. Habitual violation of obviously important "laws of health and hygiene" is mainly confined to the ignorant.

Sex attraction "goeth when it listeth" and begetting better children will never be accomplished through plans modeled upon those of the ranchman for cattle in his corral. The unwise will continue in unwisdom despite educational and propagandist programs. Those contemplating matrimony or impelled by sex urge if not restrained by force, will make up their own beds despite protests from the eugenists and uplifters.

Therefore the recent action of the Lapeer County Court in thwarting the aspirations, in this regard, of a female of twenty-two having the mental age of eight, who had already borne children out of wedlock, with an alcoholic addict handicapped by a harelip, was timely and necessary. Progeny from such a union would become all too probably an economic liability.

THE STATE SHOULD PROTECT

The state should go as far as it is prudent to protect society from deteriorating influences, but many cases are laws unto themselves and should be passed upon by the highest and most discriminating intelligence that can be brought to bear thereupon. The state can prevent propagation of the unfit in either of two ways. First by locking up the female until the grand climacteric is passed; second by sterilizing her. Segregating the "more dangerous of the species" for a long period of time is both expensive and inconvenient. Appalling numbers are clamoring for admission to the Lapeer Home and the presence in communities of many of these is a menace.

"Miss Fisher is physically normal", runs the newspaper story. "She went to work and was a capable worker under supervision."

Corollary—She should contribute to her own support.

"She was being allowed to associate with men" while on parole and now wishes to be married.

Deduction—Sterilization with or without her consent is expedient, that society may be relieved of a probable financial burden. Whether she marries or not "All makes (Society's) gain."

Intelligent medico-legal co-operation is necessary to the end of salvaging what remains of the social structure. Habitual prostitutes, convicted as such, should be sterilized as a routine measure. Emasculation may well be included in the sentence of the rapist.

To pass upon the majority of cases in the feeble minded group where consent to sterilization is not obtained, permit me to suggest a court whose decision shall be final, composed of, two members to be elected by the State Bar Association; two

superintendents of State Hospitals for the Insane; the superintendent of the Lapeer Home; the superintendent of the Colony for Epileptics; one operating surgeon to be elected by the State Medical Society.

Legislation to this end may properly be regarded a public health measure.

—C. B. Burr.

COMMUNICATIONS

To the Editor: Permit me to direct the attention of your readers to an error in the address by H. E. Randall, M. D., in your issue of October, 1928, page 625. Dr. Randall says:

"Fourteen large American cities reported last year 6,387 cases of smallpox with 1,298 deaths, which teaches us that no one can predict when a severe form of smallpox may replace the mild form."

The Statistical Bulletin of the Metropolitan Life Insurance Company for May, 1928, gives the total number of deaths from smallpox in the United States and Canada in 1927 as being only 146. (This covers 40 states, the District of Columbia and 7 Provinces in Canada). There were only 25 deaths from smallpox in 574 cities in the United States.

H. B. Anderson,
Secretary, Citizens Medical
Reference Bureau.

Editor of The Journal:

I want to express to you personally and to the Pediatric Section of the State Medical Society my deep appreciation of the sympathy and of the tribute to Dr. Larned, conveyed in the resolutions with your kind letter of October 6th.

Very sincerely yours,

(Mrs. Frederick J.) Kittie Larned.

DEATHS

Whereas, The Pediatric Section of the State Medical Society feel keenly the loss of Dr. Frederick J. Larned of Grand Rapids, their former chairman and a valuable and untiring member of the original iodine salt committee; and

Whereas, His personality and influence will be missed by all members of this section; be it therefore

Resolved, That our heartfelt sympathy be extended to his family and that these resolutions be spread upon our minutes and a copy will be sent to the bereaved family and also published in the State Journal.

* Dr. Burr has written this brief paper at the request of the Editor whose grateful acknowledgement is here expressed.

DR. GEORGE W. JONES

Dr. George W. Jones of Imlay City, passed away at his home October 1st. He was born in Durham county, Ontario, February 11th, 1839. In 1854 he began the study of medicine with Dr. E. G. Dorland of Belleville, Ontario, where he remained a year prior to entering the Medical Department of Victoria College. After two years he went to the University of Buffalo Medical College, where he graduated in 1858, beginning practice in 1859 at Prince Albert and Port Perry, Ontario. Dr. Jones moved to Imlay City in 1870, where he was engaged in active practice up until the time of his death. He was for thirty years a local surgeon for the Grand Trunk Railway and a member of the Lapeer County Pension board, and chairman for fifty-two years of the Congressional Board of Trustees. He is survived by two sons, Dr. Morrell Jones and Dr. M. C. Jones of Youngstown, Ohio, and one daughter, Mrs. G. F. Butler of Imlay City, with whom he lived, his wife having died in the year 1914.

THE CARBON MONOXIDE HAZARD
OF THE AUTOMOBILE

Formerly the dangers of carbon monoxide poisoning were confined to occasional exposure to the gas in mines or about blast furnaces, or to asphyxiation with illuminating gas. With the increased use of "water gas," which contains about 40 per cent of carbon monoxide in contrast to the concentration of from 4 to 8 per cent in the old fashioned coal gas, the fatalities have increased. The danger of leaks from the use of inferior rubber hose for gas supply connections has become so serious that the employment of such material is wisely prohibited in some places. However, the principal danger must now be assigned to the exhaust gas from the modern internal combustion engine, of which the automobile is the omnipresent example. The mounting records of deaths in closed places, notably garages, in which the atmosphere is vitiated with exhaust gases have aroused nation-wide concern.

It is generally stated that an admixture of more than 1 part of carbon monoxide in 10,000 parts of air (or 0.01 per cent) constitutes a health hazard. Five years ago Henderson and Haggard of Yale University made physicians aware of the possibility of the existence of chronic or repeated carbon monoxide poisoning, to be looked for not only in the usual places, such as dwellings with leaky gas pipes, but also in streets where motor traffic was very dense. Subsequently reports by Wilson, Gates, Owen and Dawson seemed to establish further the evidence of a definite risk of repeated or chronic slight carbon monoxide anoxemia.

The most recent survey was undertaken by experts of the United States Public Health Service. Fourteen of the largest cities in the country, having a combined population of more than 19,000,000, were visited and studied at places presumably indicating the maximum hazard from automobile exhaust gas that may exist today in metropolitan thoroughfares. The average of 141 tests made in city streets at peak hours of traffic showed a contamination of 0.8 part of carbon monoxide in 10,000 parts of air. Only 24 per cent of all the street samples had more than 1 part of carbon monoxide in 10,000 of air, and in only one location, a covered passageway, was there as much as 2 parts in 10,000. Samples taken inside of autobusses yielded even lower concentrations of carbon monoxide gas. According to these investigators, the figures for street air, when

viewed in the light of present-day standards of exposure to carbon monoxide, do not reveal the existence of a health hazard from this source in our city streets. The only person who may possibly be exposed to a health hazard from inhaling street air containing automobile exhaust gas is the traffic officer. This potential hazard may be minimized by diminishing the duration of exposure at the most congested traffic stations. The tests of Bloomfield and Isbell indicate, further, that the great danger to life is unquestionably in the small private garage containing one or two cars. Under any circumstances the discharge of an automobile exhaust into a roofed enclosure should be regarded as a hazardous act.—*Jour. A. M. A.*, Sept. 1, 1928.

GASOLINE

(By Science Service)

Ideas as to what constitutes a good motor gasoline have changed in the last few years, J. Bennett Hill, petroleum chemist of Philadelphia, told the American Society for Testing Materials at its annual meeting here.

"The question is now being considered in the light of what the automobile engine demands for optimum performance and of the limitations placed on the material by transportation, handling and storage requirements, rather than in the old light of what appealed to unenlightened public prejudice."

The properties required by the engine are primarily ease of starting in a cold motor, normal functioning without choke at the lowest possible temperature, uniform feed from the carburetor, and combustion under high cylinder pressures with minimum "knock." These points can be suitably covered by volatility and detonation tests. Other characteristics such as odor, corrosive qualities of the fuel itself or of the exhaust gases, crank case dilution and formation of solid deposits are important secondary requirements of the automobile. Handling, transportation and storage require in addition that the fuel have a minimum evaporation loss, that it be not subject to chemical or physical change on long standing, and that it be as free as possible from any harmful physiological effects from contact with it. Practically all of these requirements can be covered by the laboratory tests which are now used to determine gasoline quality. Color and gravity, the criteria of former times, are conspicuously absent from these significant tests.

RABIES A CHILDREN'S DISEASE

(By Science Service)

Rabies may be classed as a disease of childhood, along with whooping cough and scarlet fever. Six out of ten deaths from this disease were among children under 15 years. Of these deaths, seven out of ten were small boys. The period between five and ten years has the highest mortality from this cause, according to statistics of the Metropolitan Life Insurance Co.

The reason for this high mortality among children is twofold. First, naturally, children are more exposed to rabid dogs than adults, because of their habit of making pets, even of stray dogs. Second, the period of development of the disease has been found to be shorter and there is consequently less time to get the child inoculated with the serum which prevents the development of the disease.

Official Minutes of the 108th Annual Meeting of the Michigan State Medical Society

Held in Detroit, Michigan, September 25-26-27-28, 1928

1. Minutes of Council.
2. Minutes of House of Delegates.
3. Minutes of General Session.

MINUTES OF THE COUNCIL

The first session of the Annual Meeting of the Council was called to order in the Book-Cadillac Hotel in Detroit, at 6:30 p. m., September 25th, 1928.

Chairman Stone presiding and the following Councilors present: Stone, Urmstrum, Van Leuven, Greene, Cook, Ricker, Corbus, Burke, Bruce, Powers, LeFevre, Heavenrich, President Randall, Speaker Carstens, Editor Dempster, Chairman Defense League; Tibbals, Commissioner Kiefer and Secretary Warnshuis.

The following absences were excused: J. H. Charters by reason of sickness; C. E. Boys, absent from the state.

1. On motion of Urmstrum and Ricker, the minutes of the meetings of the Executive Committee were approved.

2. Representatives of the Michigan Crippled Children Commission conferred with the Council relative to the administration of the "Crippled Children Act." A lengthy discussion was engaged in. A motion was made that the Council transmit to the House of Delegates the Commission's request that a Conference Committee to represent the State Society at the conference to be held in Lansing October 4-5th and to recommend that the House of Delegates authorize the appointment of such a committee: Green and Powers.

3. The Council then reviewed its annual report and on motion of Ricker and Burke approved the same. (See minutes of the House of Delegates).

4. Adjourned at 11:10 P. M.

SECOND SESSION

1. Sept. 26, 1928: Chairman Stone presiding. The Council in conference with the Legislative Commission and the Legislative Committee of the House of Delegates devoted the noon hour to the discussion of the proposed bills to be introduced in the next session of the legislature. No definite action was taken by the Council.

THIRD SESSION

1. September 27, 1928: Chairman Stone presiding.

2. Secretary reported on the details of the annual meeting.

3. No business was referred by the House of Delegates.

4. On motion of Powers and Greene—R. C. Stone was elected chairman for the ensuing year.

5. On motion of Heavenrich and Burke—B. R. Corbus was elected vice-chairman.

6. Secretary drew attention to the large amount of correspondence that would be entailed by reason of our legislative program and on motion of Ricker and Cook was authorized to employ additional stenographic help.

Adjourned.

F. C. Warnshuis, Secretary.

HOUSE OF DELEGATES—MICHIGAN STATE MEDICAL ASSOCIATION

WEDNESDAY MORNING, SEPTEMBER 26, 1928

The 108th Annual Session of the Michigan State Medical Society's House of Delegates was called to order in the Crystal Ball Room of the Book-Cadillac Hotel, Detroit, at 10:35 a. m., Speaker Henry R. Carstens in the chair.

The Speaker: The House will be in order.

Is the Credentials Committee ready to report?

Dr. C. M. Williams (Committee on Credentials): Fifty-six have been registered.

The Speaker: The Credentials Committee have reported fifty-six as being present, thirty being a quorum. If there is no objection, we will accept this preliminary report of the Credentials Committee.

We will have a roll call.

The Secretary: Mr. Speaker, your Secretary holds in his file signed attendance slips of fifty-six delegates. I move that this be accepted as the roll call of the House for this morning session.

The Speaker: You have heard the motion.

... The motion was seconded by several delegates, was put to a vote and carried ...

The Speaker: We will call the Vice-Speaker, Dr. Pyle, to the chair.

... Vice-Speaker H. J. Pyle took the Chair ...

The Vice-Speaker: We will now listen to the Speaker's address.

SPEAKER'S ADDRESS

It is indeed a great privilege to open the meeting of the House of Delegates of the Michigan State Medical Society upon the occasion of the one hundred and eighth anniversary of the founding of the society. As there are many things of importance to come before the House, your Speaker will make but a few brief remarks.

These are indeed parlous times for the medical profession. It is a strange trait in human nature that everyone considers that his own knowledge of the construction and activities of his body is extensive. In continuation of this individual viewpoint, physicians have noticed in the past few decades, and particularly in the past few years, that the laity are taking an increased interest in all medical activities. Besides taking an interest, they are actively participating in certain fields, and are taking over many fields which previously were exclusively medical. We have noted particularly the development of the uplift movement. Originally initiated by physicians, this movement, within its proper sphere, has been deserving of continued participation and co-operation from physicians. Unfortunately, it has in certain instances undergone exuberant development, and when this has occurred, it is natural to expect that the physician will hear the promise of utopia with little enthusiasm. The ideals of the profession are an ancient heritage, and the traditions of personal and charitable service in the case of the indigent sick, have been, in the past, shared chiefly with the clergyman. But in modern times these services have been analyzed in the spirit of the efficiency expert. Their application has been widened and tremendously improved. Dispassionate observers have noted, however, that the personal element has lessened, and the budget to cover salary rolls and other machinery has markedly increased, even though no organized effort has been made to remunerate the physician whose services still form the essential part of the public service rendered. But the physician expects no remuneration for this service, nor would he accept any, but he is somewhat puzzled by the incongruous situation.

Of even greater importance are those

factors which form the rather vaguely defined spectre commonly known as "State Medicine." Our profession has been more seriously threatened by the inroads of paternalism than any other profession or occupation. Fortunately our State Medical Society has been very active in its study of these problems and is increasingly so at the present time. In our consideration of these problems, let us continue studying them thoroughly, avoiding the utterance of criticism based on hasty judgment, and avoiding the appearance of chiding society for its tendencies. This is easily misconstrued as arising from selfishness. We must remember that we do not practice the healing art by divine right, but as a privilege conferred upon us by society as a whole of which we individually are units, and our profession, a group. Let us rather, in the role of technically competent individuals, persist in our patient course of educative procedure in order that future paths may be laid in the direction where they will lead most surely and safely toward the public welfare.

Of all occupations, we have always felt that ours has been at the very head, constantly striving for self-improvement in the art of healing and in its activities for the good of society as a whole. Our own state Medical Society, we are proud to state, has been among the most active in its study of all phases of medical practice and problems. Our County Societies as units have accomplished much during the past years. It is impossible to enumerate all these activities. To mention only a few, let me draw your attention to the excellent milk ordinance sponsored by the Kent County Society, the noon-day conferences for the younger members of the profession, and the radio broadcasting instituted by my own County Society, the excellent solution in the care of the county poor sponsored by some of the upper state societies. Let us continue even more diligently at these constructive programs in the future.

There are many reports to come before this House today. Your committees have labored earnestly and thoroughly, their reports are deserving of our most careful consideration. The majority of these reports have already been printed in our journal and presumably you have familiarized yourselves with them. Your secretary wrote me several weeks ago suggesting that the number and importance of these reports was so great that no one business committee could handle all of them. Accordingly, your Speaker requests that he

be authorized to appoint a number of committees for their consideration. These committees will review these reports carefully and will make recommendations to this House for further action.

—Henry R. Carstens.

The Vice-Speaker: The Speaker's address will now be referred to the Business Committee.

As I sat here I thought of "Daddy Carstens." I think this concise, rather unique address, which at once is businesslike and altruistic, is a monument to "Daddy Carstens."

I think you bear the same relation to "Daddy Carstens" that the pyramids do to the Pharaohs of Egypt. (Applause).

... The Speaker resumed the Chair ...

The Speaker: The next order of business is the address of the president of the society, Dr. H. E. Randall.

... The House arose and applauded President Randall ...

... President Randall gave his address. ... (Applause). (Published in the October Journal).

The Speaker: This address will be referred to the Business Committee.

The next order of business is the annual report of the Council, Dr. R. C. Stone, chairman.

Dr. Stone (Council): Mr. Speaker and Members of the House of Delegates: I am going to depart a little bit from the customary procedure of rendering the annual report of the Council. The report this year is very lengthy, and it has taken a great deal of time on the part of the Council as a whole to prepare the subject matter, the script of which has been prepared by our able Secretary. In a moment I am going to ask him to read you the report of the Council.

However, before that, I want to acknowledge before the House of Delegates the very splendid service which every member of the Council has rendered this society in the past year. I know of no occasion on which any one has tried to "pass the buck." They have all worked earnestly and energetically and have always endeavored to keep in mind what was for the best interests of the profession as a whole and for the society.

With those few brief remarks I will ask our Secretary, Dr. Warnshuis, to read the report.

... The Secretary read the report of the Council ...

COUNCIL'S ANNUAL REPORT TO THE
HOUSE OF DELEGATES, SEPTEMBER, 1928

To the House of Delegates:

The Council transmits this, its Annual Report to the House of Delegates.

INTRODUCTION

Organized medicine today stands before the public as the accepted leader in all matters pertaining to scientific medicine. The public accords to our society definite obligations and responsibilities. Our members likewise, intrust to the society obligations and responsibilities in addition to definite executive and administration functions that reflect their individual and collective position and opinions in matters scientific and politic. Your Council, Officers and Committees are profoundly conscious at all times of this position. In official activity, that thought has been paramount and dominated the administrative and executive work reflected in this Annual Report.

FINANCIAL

The financial receipts and expenditures of the society are annually reported in itemized form in the Journal at the close of the Society's official year on December 31. In view of which your Council at this time submits its trial balance as of August 31, 1928. In reviewing these figures it is to be remembered that the balance reported is still to be drawn upon for the expenses arising during four remaining months of the year which includes the expenses of this Annual Meeting. The sum of \$17,341.66 must be deducted from the reported reserve because these are trust funds administered by your Council. The Defense League has a cash and reserve fund of \$15,058.32. The society has a cash and reserve fund of \$30,294.05.

MEMBERSHIP

Our membership on August 31st was 3,257 members, represented in the Counties herewith listed:

Alpena	16
Northern Michigan	14
Barry	12
Bay	61
Berrien	41
Branch	13
Calhoun	108
Cass	7
Chippewa-Mackinac	15
Clinton	18
Delta	21
Dickinson-Iron	14
Eaton	21
Genesee	126
Gogebic	22
Grand Traverse-Leelanau	23
Gratiot-Isabella-Clare	31

Hillsdale	22
Houghton	40
Huron	7
Ingham	79
Ionia-Montcalm	38
Jackson	62
Kalamazoo	117
Kent	196
Lapeer	20
Lenawee	34
Luce	10
Macomb	33
Manistee	10
Marquette-Alger	38
Mason	11
Mecosta	21
Midland	7
Menominee	11
Monroe	33
Muskegon	60
Oceana	8
Newaygo	10
Oakland	102
O M C O R O	8
Ontonagon	5
Ottawa	29
Saginaw	66
Sanilac	12
Schoolcraft	6
Shiawassee	31
St. Clair	49
St. Joseph	16
Tri	18
Tuscola	24
Washtenaw	124
Wayne	1,337
Total	3,257

POST GRADUATE CLINICS

Councilor District Post Graduate Conferences were conducted during 1928 as follows:

- 9th District—Manistee, April 26.
Detroit, May 14-15-16-17.
- 4th District—St. Joseph, May 31.
Jackson and Washtenaw, June 22.
- 7th District—Lapeer, June 28.
- 13th District—Gaylord, July 18.
- 11th District—Fremont, August 30.

A four day Clinic was conducted in May in Detroit and recorded a registration over 1,200. Two day Post Graduate Clinics will be conducted in Flint, Grand Rapids and Jackson in October, and in Ann Arbor in November.

The conducting of these conferences and clinics demand much supervision and time for their successful institution. A large amount of correspondence is entailed and the mailing of individual programs and obtaining publicity consumes many hours. We are of the opinion that the efforts expended have yielded much that was of profit to our members.

The responsibility for these clinics was shared by the Department of Post-Graduate Medicine of our State University, and in the Detroit clinic there was joined with us the Alumni Association of the Detroit

College of Medicine and Surgery and the Wayne County Medical Society. The Detroit clinic proved a very happy venture, and we confidently look forward to permanency in this affiliation. As plans progress, details of further post-graduate development will be announced.

WOMEN'S AUXILIARY

The Council has financed the organization of a State Society Women's Auxiliary. A goodly number of our county units have organized County Auxiliaries. The Council recommends that each county unit perfect such a local auxiliary. Their services will be of inestimable value in the solution of social and legislative problems.

MATERNAL SURVEY

The Council submits for review and such action as may be deemed desirous the report of a survey of maternal deaths in Michigan.

ANNUAL MEETING

The Council requests the House of Delegates to designate what time of the year our Annual Meeting is to be held, when a meeting place is determined.

HONORARY MEMBERS

The Council nominates the following as Honorary Members:

Victor F. Huntley, Lansing.
C. J. Eunice, Ishpeming.

EXECUTIVE COMMITTEE

The Council's Executive Committee has held monthly meetings. At these sessions all our society's interests and activities received consideration. In this manner supervisory direction was executed. The minutes of the Executive Committee meetings have been reported in each issue of the Journal.

The Council held a special session on July 28, attended by all the Councilors at which time pending problems were thoroughly reviewed.

ENDOWMENT FOUNDATION

The Council once more directs attention to the Endowment Foundation and urges that you authorize the appointment of representatives in each county to solicit subscriptions. The importance of so doing is self-apparent, for as our activities expand greater financial income is requisite.

REFERENCE COMMITTEES

Your Council urges that in view of the several tremendously important matters that demand definite action on the part of the House of Delegates that you authorize

the appointment, by your Speaker, of the following Sub-business Committees:

- a On Hospital Survey.
- b On Legislation.
- c On Maternal Mortality.
- d On Endowment Foundation.
- e On Nurses' Training.
- f On Institutional Care of Mental Cases.

It would be an absolute impossibility for the one Business Committee to review and act upon these reports together with the Annual reports of Standing Committees.

LEGISLATION

The Council transmits to the House of Delegates the report of the Legislative Commission.

The importance of the two bills suggested for introduction in the pending session of the next Legislature, cannot be over emphasized. In September the chairman of the Council called a special meeting with the Legislative Commission for the consideration of this report.

The Commission has given much study to these proposed bills and the Council believes that the Commission is offering a proposed bit of legislation which is ideal; that the two bills in their subject matter offer all that might be sought in guaranteeing that the individual who seeks to treat the sick has a sufficient preliminary education to permit him to properly grasp the further specific education necessary to make his competent. However, the Council feels that in so important a matter it cannot take the responsibility of endorsing this report except as it points out to the House of Delegates certain questions which must be considered.

We therefore place before you some of the questions which you must answer favorably if you accept the report of this Commission and desire to go before the Legislature with these bills.

1. Is the time propitious for this legislation?
2. Is there any reasonable assurance that these bills can be enacted?
3. The Michigan Medical Practice Law has, in the past, been considered a model bit of good legislation. It is today quite superior to the laws of most states. Are we jeopardizing a fairly good law in our attempt to pass what we consider a better law?
4. Are there inter-related problems and conditions in which the profession's interests and welfare are vitally concerned, so that it would be in-expedient to press this legislation at this time?

The Council is reluctant to submit these bills to you without pointing out some possible weaknesses. To the end that such

weak spots may be discovered, if present, we have sought the best advice that we could get. We raise the question so as to evoke the most thorough deliberation on the part of the House of Delegates. We desire to be on safe ground, and we have briefed some of these possible weak points and possible objections which we feel should be considered by you. The advantages and disadvantages of these bills must be considered most carefully.

We are therefore asking that the Speaker appoint a special committee to which this report shall be referred. We further ask that this committee be directed to hold a conference with the Legislative Commission and the Council, following such conference, the special committee to formulate its findings and recommendations and report back to this House for final action.

The Council transmits certain statements for informative purposes.

1. Our present law has been a statute for a score of years and is well sustained by rulings and decisions in our Michigan courts. The enactment of new laws, thereby repealing the present law invites a series of court procedures over a period of years to sustain the legality of the provisions of these new bills. Are we prepared to join in the defense when the attacks are made?

2. If the weakness of our present law rests in lack of enforcement powers, cannot that deficiency be overcome by utilizing the promised support of the attorney general's office and state police department? If so, is this new legislation still desirable.

3. Do these proposed laws place upon our statutes enactments that will curtail illegal and cult practice and forestall further cult legislative endeavors? Will we not be required to maintain as great, if not greater legislative alertness to defeat new untoward legislation and to guard against amendments that seek to negative the original provisions?

4. Is legislation the solution of the irregular practice problem?

5. In fostering this legislation does the regular profession of medicine lay itself liable to public attack wherein the following indictments will be attempted to be established:

(a) In providing that the governor shall appoint a board from a list of names submitted by the state society that we are limiting the rights of the governor and the senate and so lay foundation for a charge of "class legislation."

(b) That our requirements as to preliminary qualifications are too exacting and goes too far—beyond the sentiment now existant in legislators' minds who are not as yet ready to concede that irregulars should have advanced education credits. This is substantiated by legislation passed in practically every state where irregulars have been exempted from advanced credits or requirements exacted from graduates in medicine.

(c) That the injunction clause is too inclusive and in conflict with the criminal court procedures in Michigan?

(d) Are we forcing upon Michigan institutions instituted for the care of the aged, orphans, fraternal organizations, wards, etc., the necessity of employing as a director a graduate in medicine duly licensed?

(e) That we are seeking (which we are) to legislate cults and irregulars out of business and so create a state sentiment of sympathy for the "under-dog" that will influence legislators.

(f) That we are not enhancing the safety and welfare of the people of Michigan but are selfishly seeking to entrench ourselves more securely and in the nature of the oft repeated allegation—"Building a Medical Trust."

(g) That in the past, we cannot show conclusively that the low educational standards now existing for cults has in any way menaced the health of the people. Hence the argument: why then raise these standards now.

(h) That the definition of the "Art and Science of Healing" excludes lay persons from following pursuits in no way intended to care for the sick. Further that the exemption of the "Healer using prayer" may add to his prayers therapeutic measures.

(i) In specifying acceptable schools we are instituting "class legislation."

(j) That we fix standards of medical education while such standards are not agreed upon and are being now subjected to controversial debate.

6. In view of a palpable tendency toward so-called "State Medicine" and the invasion of "Free Clinics" in the field of practice, may not these modernistic, social proponents utilize our legislative program to firmly intrench themselves and will we not have forfeited our influence as well as prestige that is quite imperative for us to safeguard in order that we may circumvent all such movements?

7. Is "Cult" and irregular practice not

a dying menace; so much so that we need have but little concern as to their future?

8. May not more far reaching results be obtained by the "Pressing On" of our program of public education so that as public knowledge broadens an effective instrument is developed that will relegate into the discard all irregulars.

9. If an injunction measure is deemed essential, can it not be obtained by amendment to the criminal code and thus remove from jeopardy our present practice act.

If following the consideration of these germane, inter-related factors, the House of Delegates, representing our component membership, determines that it is our organizational responsibility to so acquit ourselves of the trust to conserve and protect the health welfare of Michigan's citizens—then the Council commends the introduction of this proposed legislation.

SOCIETY ACTIVITY

The Council submits for information and without comment, because reports have been published from time to time, the following enumeration of additional society activity that has received during the year your Council's considerate attention:

1. Joint Committee on Public Health Education.
2. Medico-Legal Defense.
3. The Journal.
4. National Legislation supervised by the American Medical Association.
5. Public Information and Publicity.
6. Organizational Problems in many of our County Societies.
7. Annual Conference of County Secretaries.
8. Details of Annual Meeting, Section Programs and Commercial Exhibits.

MENTAL CARE

The Council transmits a report of a Special Committee appointed to ascertain the need of greater institutional facilities for our mental cases.

JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION

Attention is directed anew to the activities of this educational agency—a child of our State Society. The minutes of this committee's meetings have been regularly published in the Journal. The work that is being accomplished is of tremendous importance, exceedingly far reaching in results and contributing materially to the profession's prestige with the lay public. Your Council does not attempt to adequately enumerate all that is being achieved. Attention is, however, directed to the increasing scope of the avenues constructed in steadily growing numbers of newspapers wherein this information is

being imparted to the reading public. Truths pertaining to scientific medicine are thus being disseminated.

The dependable educational information imparted in the high school program of lectures is of consequential value that will be productive of inestimable good.

The Speaker's Bureau is providing speakers who carry the message of scientific medical resources to thousands of lay listeners. Appraisal of the accomplishments or value of such activity cannot be computed in words or figures.

The committee's work merits, yea demands, more and greater support on the part of our component units. The Council recommends that each delegate direct the attention of his County Society to the objects and aims of this committee. Further, that each delegate instigates a greater participating activity in sponsoring local meetings that will be addressed by representatives enrolled on the Committee's Rostra of Speakers.

Public education in matters pertaining to scientific medicine well merits the unqualified support of all our County Societies. Your Council urges that such action be recorded and that such specific recommendations emanate from this House of Delegates.

LEGISLATION

The Council desires to reiterate its approval and appreciation of the activities evidenced by our Legislative Committee, officers and certain members who were commendably active and who contributed much of their time to this work during the last session of the Legislature.

The Council is appreciative of and grateful for the increasing interest which our members are taking in organized medicine in Michigan. It is not to be expected that we will all think alike, and we look for and encourage the frankest comment and criticism. We are confident, however, that the more fully you follow the work of this body, the more likely are we to find ourselves in agreement. While principles must never be lost sight of, the importance of our presenting a united front must be emphasized. In this connection we should keep in mind that the pages of our Journal are read by many besides our own members and many discussions might to advantage be limited to the confines of the Council, the various committees especially concerned, or at most, to the House of Delegates.

It must ever be remembered that the profession is of but 4,000 numerical

strength. That proponents for debatable legislation frequently were represented and had endorsements from granges, luncheon clubs and parent-teacher associations numbering a hundred thousand and more. Their influence and preponderance was at times quite consequential. Failure on the part of our members to secure lay support, in their respective communities, mitigated materially in our endeavors. Compromises had to be made and always will have to be conceded. Vain, fatuous, foolish individual is he who assumes that all the profession has to do is to ask and it will receive. Such is not the spirit of legislators. Your Council and your Legislative Committee sought the ideals, but when these were unattainable, compromises were agreed upon to protect as far as possible the profession's interest. In addition, unbeknown to anyone but the Executive Committee, a representative firm of attorneys had one of its members in Lansing during the session, working to protect the public and to raise the standards of medical service, at the expense of the society. Your Council finds that the profession was capably represented and as a result we fared better than the sentiment, factors and conditions existing in the Legislature warranted.

The coming session of the Legislature is approached with no little trepidation. Your Council has already undertaken measures for the protection of the profession's interests. A proposed qualification act and amendments to our Medical Practice Act is transmitted herewith for your approval. When, and if approved, there will be a vast amount of work requisite to secure the enactment of this law and these amendments. The support of every County Society and of every member must be subscribed and evidenced. Similar support will be required to combat untoward legislation that we confidently expect will be introduced. Your Council, your committees, your officers and your attorney may appear and will appear in Lansing. More than appearance is essential. They must have the intelligent, whole-hearted interest of our members. In addition, members must go out and secure thousands of lay supporters. Without such backing our efforts will be quite feeble and oft-times futile. The Council is alert to your legislative interests, but needs vigorous support in its legislative representations.

ECONOMICS OF PRACTICE

The Council notes with sustained attentiveness and solicitous concern the

trend of the economics of medical practice. Cognizance is taken of the tendency toward institutionalism, of the hospital's greater invasion into the fields of practice, of lay control and direction of clinics offering medical services, of corporations providing medical service beyond the bounds prescribed by compensation laws, of individuals and groups of doctors pursuing independent courses with little, if any regard for or to their fellow practitioners or to the policies of county and the state society. Sustained cognizance is also ours as to individual and collective attitudes towards some phases of public health work. The Council also remains conversant with the opinions expressed pro and con by national, state and local medical organizations, and medical schools as well as lay organizations. Controversial opinions, expressions and recommendations voiced in meetings or recorded in writing have not gone unnoticed. We perceive the attitudes, frequently at great variance, expressed by doctors. We regret that while some of them are wholly void of ulterior motives, some are all too often voiced from selfish, bigoted and personal attitudes inspired by one or at the most, a limited few individualistic experiences.

By and far there is a manifest stage of unrest, a fermenting and a milling of forces that beget a condition of unrest prophetic of new adjustments in our public relationships. The solution is not borne of the moment. No one individual, group or coterie has as yet tendered the ultimate solution of our problem. Your Council does not presume to set up the fundamentals of solution for these economic conditions. The Council does hold, however, that a policy of alert contact must be maintained and purposes to so represent your society. Coincident with that position of watchfulness the Council urges that our members give heed to the following general principles pending a more satisfactory economic state of affairs.

1. A greater manifestation of individual and collective allegiance to your County Society.
2. Discouraging and declining support to all movements that divorce from the County Society the study and solution of our ills. There is no need or demand for the formation or activity of independent groups that concern themselves with problems that inherently are the concern of County Units. We urge that allegiance to your County Society be manifested and continued by causing the County Society to supervise and direct policies that are to be observed or the studies and activities that are recorded.

3. That individually every member observe the tenets of our principles of medical ethics, holding steadfastly to obligations to all co-workers, mindful and considerate of the weak by tendering a helping hand and at the same time contending with the strong to exhibit loyal fellowship for the sustaining of the equal rights of all. Arrogant, independent selfish action on the part of anyone well needs reprimand and termination. Ideals are to be sought, and maintained by all.

The ultimate solution and the creation of policies can only be attained as time leavens the whole. The Council does feel, however, that some steps should be taken towards educating the public as to its need of assuming a definite responsibility for their physical well being and care in the prevention and treatment of its ills and bodily defects. The trend of the times indicate a state of unconcern of eventualities that may intervene to incapacitate them. There is a very tangible manifestation on the part of the public that in the event of sickness, accidents or disability that care will be forthcoming from the hospital, clinic or public agency and that they have little or no need for financial preparedness. It, too, must be remembered that hospitals, clinics and social agencies are dependent upon doctors for the rendering of professional services. We can and should emphatically and clearly dictate the policies and principles under which we serve. Though there are some institutions and health officials who manifest an attitude of "You do as we say and under our terms and conditions or else we will hire full time doctors to render this service," yet it is your Council's opinion that a solidarity manifested by our entire profession would be warning against such actions.

Your Council therefore recommends that they be authorized to institute an educational public campaign as the Council may deem most effective and expedient.

CONCLUSION

These comments and observations are submitted as assurance that your Council is not unmindful of the responsibilities that are reposed in it. We are conscious of our members' interests and seek its conservation in so far as we are able to exert influence and direction.

Scientific medicine today is proud of its rich heritage and confidently looks up and forward to still greater achievements that will be reflected through the individual doctor imbued and sustained by high, unselfish ideals. Our society has commendably acquitted itself of its organizational ideals and purposes. It has and will con-

tinue to exercise a wholesome influence in our commonwealth. It will jealously retain its prestige, reflect the purposes that justify existence and assume to ever faithfully discharge its responsibilities.

The Council does not presume that it is possessed of self sufficient discernment, nor does your Council hold that its members constitute the ultimate court from which unquestioned solution of all our economic problems may be or can be obtained. Your Council welcomes and recommends conservative criticism, suggestions, and the freest possible discussion to the end that the responsibilities which you have delegated may be most efficiently and acceptably performed.

Such are the purposes that govern. It is with full realization of such purposes and responsibilities that executive and administrative action is recorded, and inspires this Annual Report.

By direction of the Council,

R. C. STONE,
Chairman.

F. C. WARNSHUIS,
Secretary.

The Secretary: Mr. Speaker, at the session of the Council last night, the Council, by motion, directed that the following be conveyed to the House: The debate as to the Crippled Children Act and the work that is being done by the Crippled Children Commission of Michigan, created by the act of our legislature, has been a matter of much concern to the Council and to a good many of the members. Much discussion has been engaged in as to the functioning of that Commission and its possibilities and its respecting the rights and interests of the profession of Michigan.

To that end, the Council invited representatives of that Commission to meet with it last night. The disagreements, points of contention and the differences that have arisen during the past year were quite thoroughly discussed. The representatives of the Commission are to hold a session in Lansing in October, on October 4 and 5, for the consideration of a program of their activity during this coming legislature and also the coming year.

They request that the State Society appoint a conference committee of five members to represent the profession of Michigan in the matter of the administration of the Crippled Children's Act, in order that a harmonious agreement and understanding may result from the co-operation of these two groups.

Your Council, therefore, recommends to the House of Delegates that you authorize the appointment of such a committee to represent you before the Crippled Children's Commission meeting in Lansing in October.

Dr. J. D. Brook (Kent): Mr. Speaker, not in a good many years has there been so much important business presented, or will be presented to the House as there is this year. Inasmuch as the next order of business is the appointment of reference committees, it seems proper that we take some action at this time to make provision for the examination of all these various reports. Therefore, since our by-laws provide for but one reference committee, the Business Committee, and because it is obviously impossible for that committee to bring in an adequate report on all these various subjects, I move that we concur in the recommendation of the Council, that special reference committees be appointed by the Speaker for the consideration of the various subjects as recommended in the report.

Dr. C. S. Gorsline (Calhoun): I support the motion.

The Speaker: You have heard the motion directing the Speaker of the House to appoint additional committees for the consideration of certain of the reports, supplementing the work of the regular Business Committee, and for later report to the House. Is there any discussion?

... The question was called for, was put to a vote and carried ...

The Speaker: The appointment by the Speaker of the Business Committee is:

Milton Shaw, Chairman
James H. Dempster
W. T. King
G. H. Southwick
P. H. Quick

The Council recommended that separate committees be appointed for consideration of the following reports:

1. The legislative report upon the proposed new Medical Practice Act;
2. The report on Maternal Mortality.
3. The Hospital Survey, which we have not yet heard, but which will come up for hearing a little later.
4. The Nurses' Training Committee report.

The Speaker appoints the following members of the House of Delegates on the

committee for the consideration of Legislation and the proposed Medical Act:

J. E. McIntyre, Chairman
C. F. Moll
C. S. Gorsline
R. E. Loucks
A. V. Wenger

Committee on Maternal Mortality:

W. E. Chapman, Chairman
G. V. Brown
C. F. DuBois
W. C. Ellet
R. D. Thompson

Hospital Survey Committee:

J. T. Sample, Chairman
C. R. Keyport
C. M. Williams
F. Reeder
E. D. Spalding

Committee on report of Nurses' Training Committee:

George Hafford, Chairman
W. J. Smith
C. D. Munro
S. W. Insley
N. B. Colvin

The last four named committees will consider the reports named. All other business, as well as the Council report which we have just heard, will be handled by the Business Committee.

The Speaker wishes to urge the utmost speed possible on the part of these committees in consideration of the reports. As you will see, we have a tremendous amount of work to do, and it is desirable, if it is possible, to take up the recommendations of several of these committees at the afternoon session which will take place at 2:30 o'clock.

The next regular order of business is the election of the Nominating Committee. Please note that no two members of the Nominating Committee shall be from the same Councilor districts.

"Duty of Nominating Committee:

"(a) Supervise ballot for President.

"(b) Nominate four Vice Presidents; nominate Delegates to A. M. A. and their Alternates to succeed C. S. Gorsline, J. D. Brook and L. J. Hirschman; and designate place of next annual meeting."

The Speaker wishes to remark there will be plenty of time for all the nominations that anybody wishes to make, and the election of that committee will take place in the usual way.

Dr. C. F. McClintic (Wayne): I would like to place in nomination Dr. Perry.

Dr. A. W. Hornbogen: I wish to place nomination.

Dr. H. J. Pyle: I would like to place in nomination Dr. Southwick.

Dr. A. P. Biddle (Wayne): I wish to nominate Dr. Catherwood.

Dr. C. S. Clarke (Jackson): Mr. Speaker, I nominate Dr. McIntyre of Lansing.

Dr. A. W. Hornbogen: I wish to place in nomination the name of F. E. Reeder of Genesee.

R. D. Thompson (Kalamazoo): I wish to nominate Dr. George Hafford, delegate from Calhoun County.

Dr. Harry F. Dibble (Wayne): I move the nominations be closed.

Dr. C. F. Moll (Genesee): I support the motion.

Dr. A. P. Biddle (Wayne): I just want to ask if a member who has been appointed on another committee can serve on this one, if elected, that is, if a member can serve on two committees.

The Speaker: I believe one or two have been nominated who have been appointed on other committees. They have not been elected. How many have we nominated.

The Secretary: We have six.

The Speaker: We have nominated six, and five are to be on the committee.

Dr. C. F. Moll (Genesee): I think there is no objection to a man serving on two committees.

Dr. A. P. Biddle (Wayne): I am not objecting to that, but I do not think I am perfectly willing to vote for them.

The Speaker: Dr. Moll, I believe there is nothing objectionable, although all committees will be quite busy simultaneously. As a simple solution, I would suggest if anybody has already been appointed on a committee and is now elected to the Nominating Committee, that he request the withdrawal of his name, and a new member can be appointed on the previous committees that I have named.

Dr. J. E. McIntyre (Ingham): Inasmuch as I have been appointed on a previous committee, I would like to withdraw my name in support of Dr. Keyport.

The Speaker: Dr. Keyport was appointed on a committee.

Dr. G. H. Southwick (Kent): I would like to withdraw my name from the Business Committee.

The Speaker: Dr. Southwick wishes to

withdraw his name with the consent of his nominator.

The Speaker: The present motion before the House is to close the time for nominations. Six nominations have been made. Are you ready for the question?

... The question was called for, was put to a vote and carried. ...

The Speaker: The Speaker will appoint Doctors Birkelo, C. S. Clarke and V. C. Abbott as a Ballot Committee to handle the election.

The Secretary: They are to vote for five, Mr. Speaker?

While the committee is passing the ballots and supervising the election, the Credentials Committee has a report to make of supplementary delegates who have been seated.

Dr. C. M. Williams (Credentials Committee): The Credentials Committee reports there were sixty-eight names and credentials received. If there are any more credentials, they should be filed at once.

The Speaker: Have the additional credentials been filed with the Secretary?

Dr. C. M. Williams (Credentials Committee): They have been filed with the Credentials Committee.

The Speaker: Is it the wish of the House to seat these additional delegates? The Chair will entertain a motion to that effect.

Dr. J. D. Brook (Kent): I move that the delegates be seated.

Dr. C. S. Gorsline (Calhoun): I support the motion.

... The motion was put to a vote and was carried ...

The Speaker: Let me remind the House of Delegates that when a delegate is once seated, he serves throughout the meeting. That is, if he is now seated, he will also officiate as delegate this afternoon and evening. There is no later substitution.

Have all the delegates voted? If all the delegates have voted who wish to vote, I declare the ballot closed.

The Secretary: The result of the ballot is as follows: Perry received 38, Southwick 49, Catherwood 46, McIntyre 54, Reeder 30, Hafford 31. The five high appointees are McIntyre, Southwick, Catherwood, Perry and Hafford.

The Speaker: There are a number of committees, and practically all of these reports have already been printed in the Journal and will be automatically referred to the business or one of the other com-

mittees already appointed. This includes Medical Education, Public Health, Legislation, Tuberculosis, Venereal Prophylaxis, Civic and Industrial Relations, Nursing Education, Medical History and Legislative Commission. There are two reports which we will listen to this morning. Those are the reports of the Delegates to the A. M. A. and the report of the Hospital Survey Committee.

Dr. George Hafford (Calhoun): Having been elected to the Nominating Committee and following the suggestion of the Chairman, I wish to withdraw from the Committee on Nursing.

The Speaker: Dr. Hafford wishes to withdraw from the Committee on Nursing. The Speaker will appoint a new member to that Committee.

We will now hear the report of the Delegates to the American Medical Association.

REPORT OF DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

No one outstanding subject featured the deliberations of the 1928 session of the House of Delegates of the American Medical Association, held June 11-14, at Minneapolis.

For the complete transactions of the House we respectfully refer you to the issues of our national Journal of June 16 and 23.

There were, however, two or three subjects upon which action was taken in which we feel sure you are interested and to which we desire to call your attention.

At the Washington session, after previous attempts had failed, Dr. C. S. Gorsline again introduced a resolution providing that the Board of Trustees be again requested to prepare approved forms of letters or literature which may be sent out by County Medical Societies to the public to promote the value of periodic health examinations. The Judicial Council, after having ruled as unethical such action by individual physicians, states that it sees nothing objectionable to the procedure if such letters be sent out by all County Medical Societies, worded as follows:

"It is easier, safer, cheaper, more certain, more comfortable and more efficient to keep well than it is to get sick and be cured.

"Within less than half a century the average age at death has increased from about 43 to 58 years.

"This increase in life expectancy has resulted almost wholly from the great decrease in mortality during infancy and

childhood, while in middle life the average expectancy has changed but little.

"Much improvement might be made and life prolonged, if the diseases of middle life were detected in their early stages.

"The surest way to detect these diseases is through the periodic health examination.

"Have a health examination at least once a year by your family doctor."

At the Dallas session of the association there was adopted a model constitution for state associations. This model was constructed in its framework so that it would be suitable, with local modifications, for any state in the Union, and at the same time dovetail into the constitution of the parent organization. We quote a statement from a report of the Judicial Council:

"As the matter stands at present, there is a lack of uniformity in the laws of the several county societies and state associations, so that when appeals are taken to the Judicial Council, the Council finds itself unable to render consistent decisions owing to irreconcilable contradictions found in the laws of the societies or associations taking the appeal."

Your delegates feel that inasmuch as statements have been made by several of our membership that our Constitution and by-laws are not what they should be, we could with profit revamp or reconstruct our present constitution to meet at least the structural outline of the model state constitution. In support of this statement we quote further from the report of the Judicial Council:

"The Judicial Council suggests that the House of Delegates of the American Medical Association and of the several state associations make such amendments to their by-laws as will make effective the foregoing recommendations."

We commend to you again the careful perusal of the lengthy report of the Board of Trustees, giving in detail the progress and status of the various phases of our national organization. One portion of this report in which we are all financially interested is that of the Bureau of Legal Medicine and Legislation, which we quote as follows:

"After the expiration of the Sixty-Ninth Congress, March 4, 1927, a provisional committee on Ways and Means of the House of Representatives of the Seventieth Congress undertook a study of the Revenue Act of 1926 with a view to a downward revision of taxation. The Bureau of Legal Medicine and Legislation called the attention of that committee to the fact

that the language of the act about to be revised apparently allowed the Commissioner of Internal Revenue to deny to physicians the right to deduct traveling expenses incurred in attending professional meetings and to grant to members of other professions the right to deduct expenses incurred when attending meetings of their respective professional groups. The committee refused, however, to change the wording, and the bill as reported by the committee and passed by the House of Representatives will, if enacted by the Senate, permit a continuation of the discrimination. Vigorous appeals have been made to the Committee on Finance of the Senate for such a revision of the language of the bill as will prevent it. The matter was pending in the Committee of Finance when this report was written."

Dr. Olin West, in his Secretary's report, gives timely warning regarding the "Multiplicity of Medical Organizations," the essence of which we can best give you by quoting the high spots:

"The fundamental purpose of medical organization in the United States, as defined in the constitutions and by-laws of the American Medical Association and its constituent and component societies, is 'to promote the science and art of medicine and the betterment of public health.' There was a time when there were few organizations other than this association, its constituent state associations and their component county societies engaged in those activities contemplated in our scheme of organization and work. For some years, however, there has been a persistent tendency toward the creation and operation of independent scientific societies until now there are many of them in the field, some highly specialized, some apparently duplicating the work of our own societies or actually attempting to substitute for them. Besides these there are many others not strictly scientific or frankly non-scientific in character whose programs of work and statements of objectives closely parallel those of the various units of our own organization. The members of all these are, for the most part, members of our component county societies. Still other groups have come into being, and their number is not inconsiderable, made up of physicians and laymen and directed, in many instances, by the element in their membership. * * *

"The demands, in time and effort, made on our own members who are affiliated

with all of these independent bodies are so great that there is serious question as to whether the medical profession and the public are not actually suffering from the effects of over-organization due to the existence of a veritable multitude of societies, clubs, institutes, colleges, convocations, congresses, conferences, assemblies and associations. * * *

"Over-organization of a profession into official and independent groups will surely lead to division of loyalty, dissipation of effort, wasteful expenditures, inefficiency and obstruction to scientific progress. * * *

"There is reason to believe that some component county societies, among them those that formerly were both strong and efficient, have felt the deleterious effects of the existence of too many organized groups, too many meetings, and the division of effort and weakening of allegiance that can hardly fail to develop under such circumstances."

We will not go into details regarding the elections of officers. Suffice it to say that Dr. M. L. Harris of Chicago, who for many years, as chairman of the Judicial Council, gave very valuable service to the association, was elected President. The selection of Dr. Harris was a well-deserved honor.

Dr. Olin West, the very efficient and hard-working Secretary, was unanimously re-elected to that office.

By reason of acquaintance and experience on the part of your delegates we were able for the sixth consecutive time to cause the re-election of our popular and efficient State Secretary, Dr. Warnshuis, as Speaker. Those of you who have not witnessed Dr. Warnshuis in action as speaker of the national house have missed a real performance. We trust that future delegations will prove equally efficient to do honor not only to our Secretary, but to Michigan as well.

Portland, Oregon, was selected as the 1929 place of meeting. Three years ago a rule was adopted by the House that all invitations for annual meeting places must be in the hands of the Board of Trustees sixty days prior to the annual meeting. This was done so that the board could make personal investigation of hotel rates, accommodations for meeting places, taxicab rates, etc., in each city extending invitations. By obtaining this information prior to the selection of the city the board could assure the association membership that they would not be gypped as was

properly done in one city in which the meeting was held.

Detroit would liked to have had the 1929 meeting, but its invitation was received only seven days before the Minneapolis session. Despite entreaties and arguments on the part of your delegates, and assurances on the part of a representative from Detroit Board of Commerce guaranteeing prices and accommodations, the Board of Trustees could not waive the sixty day rule and consequently Detroit's invitation was not presented. We feel, however, that should Detroit desire the 1930 meeting and if and when its invitation is properly presented, your delegates would be of great value in obtaining votes by reason of acquaintance with pivot men from various parts of the country. In seeking the meeting for any city, some things should be done, and some things antagonize. The personal touch is your greatest asset.

We deeply regret that because of the hospitalization of Dr. Hirshman he was unable to attend. On recommendation of the Credentials Committee and by special ruling of the House our State President, Dr. H. E. Randall, very creditably served in his stead.

All of which is respectfully submitted.

C. F. Moll,
C. S. Gorsline,
H. E. Randall,
A. W. Hornbogen,
J. D. Brook.

The Speaker: If there is no objection, this report will be referred to the Business Committee.

There is one other report, that of Dr. Smith, Hospital Survey, which is quite lengthy, and your Speaker recommends that it be laid over until this afternoon as the first order of business. It is now almost 1 o'clock, and the report is fairly lengthy and is deserving of the very closest attention.

Dr. C. F. McClintic (Wayne): I move the House concur in the recommendation of the Chair.

Dr. F. T. Andrews (Kalamazoo): I support the motion.

The Speaker: It has been moved and seconded that the House concur in the recommendation of the Speaker and postpone the hearing of the Hospital Survey Committee's report, making it the first order of business at the afternoon session at 2:30. Are you ready for the question?

... The question was called for, was put to a vote and carried. ...

The Speaker: The Speaker wishes to announce that Dr. Hafford has withdrawn from the Nurses' Training Committee, and the Speaker designates W. J. Smith to follow him as Chairman, and the fifth member of the Committee will be Dr. R. C. Fraser. Dr. Morris will replace Dr. Southwick on the Business Committee.

There is a small amount of new business, under the heading of new business and resolutions, to come up before the meeting adjourns.

Dr. E. C. Baumgarten (Wayne): I should like to present a resolution.

"Whereas, The American Medical Association last held a convention in Detroit in 1916, and in the interim has met in practically every section of the country; and

"Whereas, Detroit has ideal convention hall facilities for the seating of 5,000, and, in addition, 60,000 odd feet in the New Masonic Temple, and is better provided with first class hotel accommodations than any other city in the nation; and

"Whereas, Detroit, with the architectural beauty of its new buildings presents an entirely different picture than that of thirteen years ago; be it

"Resolved, That an invitation be extended to the American Medical Association at its convention in Portland, Oregon, June, 1929, to meet in Detroit in 1930, and that the Michigan delegates be instructed to put forth their utmost efforts in bringing about the acceptance of this invitation."

Dr. A. W. Hornbogen: I second that motion.

The Speaker: You have heard the resolution and the second. If there is no objection, this will automatically be referred to the Business Committee for recommendation to the House.

Is there any further new business or resolutions? If there is no further business to come before the House, a motion to adjourn is in order.

... A motion for adjournment was regularly made, seconded and carried. The meeting adjourned at 1 o'clock. ...

SECOND SESSION

Wednesday afternoon, September 26, 1928.

The second session convened at 2:45 o'clock, Speaker Carstens presiding.

The Secretary: Mr. Speaker, I hold in my hand a signed quorum of the delegates present. I move that this constitute the roll of the House this afternoon.

The Speaker: If no objection, it will be so ordered.

The first business before the House this afternoon is the reading of the report of the Hospital Survey Committee by Dr. Smith.

... Dr. R. R. Smith read the report of the Hospital Survey Committee. (See supplement to November issue of *The Journal*).

The Speaker: If there is no objection, this report will be referred to the special committee appointed this morning, for consideration and recommendation to the House at the third session this evening.

Is the Business Committee ready to report, Dr. Shaw?

Dr. Milton Shaw (Business Committee): Mr. President, your Committee has reviewed the various committee reports and wishes to advise as follows:

The address of the Speaker of the House of Delegates has noted:

1. Increased interest in the scientific and social aspects of medicine;

2. The growth of state medicine and paternalism.

The Speaker counseled continued study of these phases of medicine and our avoidance of criticism based on hasty judgment. The address advocates a continuance of the policy of public education, which has been productive of good results so far.

The Speaker's address also advocated the authorization of special committees to study in detail some of the reports of standing committees and to make recommendations to the House.

With these recommendations your Committee concurs.

Report of the Council. Your Committee notes the recommendations of the Council which have not been referred to special subcommittees.

Your Committee notes with pleasure the Council's program of society activity and recommends continuation of this activity in all its phases.

Your Committee recommends the election of Dr. Victor F. Huntley and Dr. C. J. Ennis, nominated by the Council, for honorary life membership in this society.

Your Committee recommends the carrying out of the recommendations of your Special Committee on Hospitalization of mental patients.

Your Committee concurs in the recommendations of your Committee on Venereal Disease Prevention.

Your Committee concurs in the recom-

mendations of your Committee on Public Health.

The report of the Committee on Medical History has been viewed with satisfaction, and the committee commends the tireless efforts of the Chairman, Dr. C. B. Burr, under whose intelligent direction the history has progressed to such a degree that it will be ready for the printer early in 1929.

Crippled Children. Your Committee recommends the appointment of five members of the Michigan State Medical Society to confer with the Crippled Children's Commission which meets in Lansing in October. We recommend that Dr. A. D. LaFerte be named as orthopedist, that a member of the Council be appointed and three members-at-large of the State Medical Society. We recommend that the Speaker be authorized to appoint these members for the Crippled Children Committee.

Report of Delegates to the American Medical Association. Your Committee commends the activity and concise report of the Delegates to the A. M. A. and concurs in their recommendations.

The report of the Committee on Civic and Industrial Relations has been reviewed, and inasmuch as it has not been printed in the Journal of the Michigan State Medical Society, your Committee recommends that it be printed in full.

Resolution introduced by E. C. Baumgarten, in regard to the invitation to the A. M. A. to meet in Detroit for 1930 convention, is recommended for adoption.

Your Committee moves the adoption of the reports reviewed.

At this time I will introduce a special report. Your Committee notes with sorrow the death of Dr. R. C. Mahaney of Owosso, chairman of your Public Health Committee, and recommends that the Secretary be instructed to convey to his family the sympathy of this society.

The Speaker: Gentlemen, you have heard the report of the Business Committee. What is your pleasure in regard to it?

Dr. A. P. Biddle (Wayne): I move it be concurred in and filed as read.

Dr. C. F. Moll (Genesee): I second the motion.

The Speaker: Is there any discussion? Are you ready for the question?

... The question was called for, was put to a vote and carried. ...

The Speaker: The Reference Committee

upon the report of the Committee on Maternal Mortality. Is its report ready?

REPORT OF COMMITTEE ON MATERNAL MORTALITY AND INFANT WELFARE

Dr. W. E. Chapman: We, your Committee appointed to investigate the work done by the State Board of Health regarding Maternal Mortality in Michigan, beg leave to make the following report:

1. We unanimously commend the efficient, thorough, painstaking and comprehensive work done by the State Board of Health along these lines.

2. That the County Societies be requested to aid in all possible ways, especially in reporting and investigating deaths due to maternal causes along with infant mortality.

3. That some method be devised by the department whereby a booklet relating to maternity and infant care be placed in the hands of parties applying to the County Clerks for marriage licenses.

4. We most heartily recommend the continuance of this work by the department which has been productive of so much good to the mother, and the reduction of infant mortality.

(Signed) W. Earle Chapman, Cheboygan,
G. V. Brown, Detroit,
C. F. DuBois, Alma,
W. C. Ellet, Benton Harbor,
R. D. Thompson, Kalamazoo.

The Speaker: Gentlemen, you have heard this report. What is your pleasure?

Dr. J. D. Brook (Kent): I move the adoption of this report.

Dr. C. S. Gorsline (Calhoun): I second the motion.

The Speaker: Is there any discussion? All in favor of this motion will signify by saying "aye"; contrary. The motion is carried.

Is the Special Legislative Committee ready to present a report upon the studies of the Medical Practice Act, Dr. McIntyre?

Dr. C. F. Moll (Genesee): In the absence of Chairman McIntyre, I will say we are adjourning at 4 o'clock to consider this report and will try and have it ready for the evening session.

The Speaker: The Nurses' Training Committee, Dr. W. J. Smith.

Dr. S. W. Insley (Wayne): That Committee will meet at 4:30 this afternoon and expect to have the report ready for the evening session.

The Speaker: The Hospital Survey Committee will meet when?

Dr. J. T. Sample (Saginaw): Probably right after this meeting.

The Speaker: Is there any new business to come before the House? Dr. Kiefer, do you have something to bring before the House of Delegates?

Dr. Guy L. Kiefer (State Department of Health): Mr. Speaker and Members of the House of Delegates: What I have to say is not exactly new business, but it is a message that I am anxious to bring to you.

At the annual meeting held just a little over a year ago, those of you who were there will remember I stated the policy of the State Department of Health as being one of co-operation with the medical profession just as far as the medical profession would allow us to co-operate with them.

At that time I recited some little changes we had made in the laboratory work, which met with the favor of the delegates present. Since then we have done several things, and everything has been done in co-operation with the County Society and the State Medical Society.

You just heard a report from Dr. Chapman on the maternal mortality work that has been done by the State Medical Society through the State Board of Health. That is a sample of what we mean by co-operation. Just now we are considering the literature that has been used and has been distributed by the State Department of Health, and we propose to notify not only you, but all of the members of the State Medical Society of some of the literature we believe should be distributed to doctors only. We think it is perfectly proper to send out literature of a general nature to the lay people, telling them something about how some of the contagious diseases may be prevented. But when it comes to curative medicine, and what to do, we propose to do it through the doctor. We propose to send some of the literature to each doctor and ask him whether he wants more copies, and we will supply him. When we get applications we will tell them to go to their doctor, because not only what is on the chart will be a good thing for them to use, but the advice he can give them along with the charts is what they really need.

What I want to do particularly this aft-

ernoon is to make a plea to you for co-operation on your part in a particular campaign we are undertaking now, and we have undertaken before, that we want to push through the medical profession, and that is the campaign for the prevention of diphtheria. Michigan still has altogether too much diphtheria. We have succeeded in getting some cities on our list, which for three or four years have been entirely free from diphtheria because of wholesale campaigns with toxin-antitoxin. We have some counties that are comparatively free from it, and others right alongside which have all kinds of diphtheria. The ones that are free from it are those in which the doctors have conducted campaigns for the prevention of diphtheria. No such campaigns have been introduced into those that have a lot of diphtheria. I say that doctors have conducted these campaigns. Formerly the State Department of Health went out and did their own immunizing. This department at present believes that the practice of medicine, either curative or preventive, belongs to the doctors, and we want you to do it. We are perfectly willing, if we get a letter from a secretary of a County Medical Society, or from the president, to go into the country or into the city and help them organize propaganda. We are perfectly willing to go there and do the talking, if you like. We are perfectly willing and anxious to furnish the material, but we want the local physicians to do the immunizing.

We hope that the doctors will take up the preventive work and do it. It is your job, as we look at it, and we want to help you do it. We have always talked about educational work, and that is what educational work ought to be. We ought to do the educating, the telling of the public; the thing for you to do is to have your doctors take up the work. We can get the State of Michigan immunized against diphtheria if the doctors will help.

I have been told that I am losing lives by waiting for the doctors to help me and by not going out and doing it myself. I do not think it is so. We get a lot of it done. We got a lot done last year. We are making a special effort to do this one thing this fall, and we want your help. (Applause).

The Speaker: Let us all individually as delegates take back this very valuable message to our individual County Societies. That point was expressed by your Council, that we should constantly endeavor to have

the County Society initiate and become active in all these measures.

Is there any further discussion? Is there any new business to come before the House?

The Secretary: Mr. Speaker and Gentlemen of the House: Under the provision of the Constitution and By-Laws, the expiring terms of Councilors are filled by nominations made by the delegates from the respective Councilor Districts. They tender their nominations to the House of Delegates tonight, and they are then acted upon by the House, and various Councilors are elected. There are two Councilors whose terms expire with this annual meeting, that of the Eleventh and Twelfth Districts. The delegates of those two districts will meet immediately upon adjournment, in order to nominate Councilors to succeed Dr. LeFevre and Dr. Burke.

There is no other unfinished business upon your Secretary's desk.

The Speaker: A motion to adjourn is in order.

Dr. A. P. Biddle (Wayne): I move we adjourn.

... The motion was regularly seconded, was put to a vote and carried. The meeting adjourned at 4 o'clock. ...

THIRD SESSION

Wednesday evening, September 26, 1928.

The third session convened at 7:45 o'clock, Speaker Carstens presiding.

The Speaker: The House will come to order.

The Secretary: Mr. Speaker, I hold in the file a quorum of the roll call of the House.

The Speaker: If there is no objection, that will constitute the official roll of this, the third, meeting.

Further reports of reference committees. The first committee is the Committee on Legislation, Dr. McIntyre, Chairman.

Dr. J. E. McIntyre (Legislation Committee): Mr. Speaker and Members of the House of Delegates: Your Committee appointed to consider the proposed bills submitted by the Legislation Commission, met in joint session with the Council and the Legislative Commission. After considerable discussion and careful consideration of the brief submitted by the Council, your Committee begs to report as follows:

We recommend that the bills as submitted be approved by the House of Delegates, and the Legislative Commission and

the Council be authorized to add such amendments as may be submitted to them by the members of this society, if, in their judgment, the amendments and changes are deemed valuable, practical and advisable, and that those bills be prepared for introduction into the legislature.

Respectfully submitted by your Committee,

J. E. McIntyre, Chairman.

C. F. Moll,

C. S. Gorsline,

R. E. Loucks,

A. V. Wenger.

Mr. Speaker, I move the adoption of the report.

... The motion was supported by Dr. Cassidy of Wayne. ...

The Speaker: Gentlemen, you have heard the report. It is now open for discussion.

Dr. A. P. Biddle (Wayne): I just want to ask if the Commission can leave things as they are now if in their judgment it is the best course to pursue. There are so many things that would make it better to leave conditions as they are. I just want to know if they have authority to do so if in their judgment it is wise.

The Speaker: Will you explain that part to Dr. Biddle?

Dr. A. P. Biddle (Wayne): Is that Commission authorized to take no action if, in their judgment, that is the best step?

Dr. J. E. McIntyre (Ingham): We recommend that the bills as printed in The Journal and presented to the State Medical Society have the approval of the House of Delegates, with the privilege of the Legislative Commission and the Council changing or making advisable amendments thereto if, in their judgment, it is deemed advisable.

The Speaker: Also use their discretion as to the proper time for presenting them.

Dr. J. E. McIntyre (Ingham): Yes, sir.

The Speaker: Does that answer your question, Dr. Biddle?

Dr. A. P. Biddle, (Wayne): Yes.

Dr. George Hafford (Calhoun): That would leave it to their discretion of not entering the bill at all.

Dr. J. E. McIntyre (Ingham): Mr. Speaker, I wouldn't interpret it in that manner, that we would have the power of taking no action, because if it is approved as printed by the House of Delegates, it seems to me it was the understanding in

the committee that we must do something with it.

Dr. George Hafford (Calhoun): Then you recommend that they offer it at such time they deem it advisable. That might even let them put it over to another session, so it is not mandatory that it be offered at this session.

Dr. J. E. McIntyre (Ingham): It reads at the next legislature.

Dr. George Hafford (Calhoun): I thought by the reading of it, letting them offer it when they thought it was the best time might even put it to another session.

Dr. W. J. Cassidy (Wayne): I think you will have to leave this amendment to the men whom you appoint or who are appointed upon your committees to take care of your internal doing, that is, these men must exercise judgment as to what legislature they are going to propound at a propitious time. We are to blame, to a great extent, for the antipathy and the antagonism of the public at large against the medical profession, that is, we have sat on a pillar and built a wall around us so high that it is almost impossible to break our cocker shell. We can't get out as the turtle gets out from underneath his shell. In the first place, we have to get our publicity before the public through the public press and form public opinion first. We can't go ahead and blunder along and reap the harvest from the law, from other sects and other cults in figuring out that we are a monopoly. That is what has put us in the position we are in today. The minute you tread on the Christian Scientist's toe, the minute you tread on the chiropractor or any of the other fellows, they yell "woof" and "the medical profession is trying to create a monopoly."

That is what you have to do. You either have to appoint a committee in whom you have confidence to utilize their best judgment and to bring this legislation before the legislators and do it with a great deal of discretion and not bluntly and try to force an issue through, which is going to antagonize a greater number of the various cults and bring them out in the open so they congregate and unload a tremendous amount of money against what little 4,000 members of your state can put up. That has been one of the bad and main points you have today.

Again, you must look out and see who and what men are elected in your neighborhood. That is where we all fall down. We all sit by and let these men who are antagonistic to the profession, be sent

down to Lansing as Congressmen, as Representatives, and the result is, you have the battle in Lansing. You should not have to do that. That can be done in your home territory if you will get out and work a little bit and not sit in the back room and talk so much.

The Speaker: Dr. McIntyre, is it altogether clear to you now whether the committee is to use its discretion as to a proper time, if at all, for presenting these bills, or whether it is mandatory to present them at the next session of the legislature? If it is not clear, an amendment might be appropriate so you will have definite instructions one way or another.

Dr. J. E. McIntyre (Ingham): Mr. Speaker, as you will notice in that report, the committee recommends that the House of Delegates give approval for presenting this bill at the next legislature, and if you wish to change that it would have to be amended.

The Speaker: Do you understand that must be presented?

Dr. J. E. McIntyre (Ingham): If the House of Delegates vote this power to the Legislative Commission and Council, you should have enough confidence in them that they will use their discretion.

Dr. F. T. Andrews (Kalamazoo): I move that this motion be amended so that it may be left to the discretion of the committee to present this bill in either this or the next legislature, as it behooves their discretion.

Dr. George Hafford (Calhoun): I support the motion.

The Speaker: Dr. Andrews moves an amendment that the committee be instructed to present this bill at either this or the next legislature. It was seconded by Dr. Hafford.

The Chair might point out this does not clarify matters altogether, because that makes it mandatory to introduce the bill within two legislatures at least. Was that your intention, Dr. Andrews, or to utilize the best time?

Dr. F. T. Andrews (Kalamazoo): At their discretion. As it behooves their discretion.

The Speaker: Include the words "at their discretion?"

Dr. George Hafford (Calhoun): I accept that.

Dr. Guy L. Kiefer (State Department of Health): The special committee, the report of which has been made, met in

conference with the Legislative Commission and the Council, and I understood while in that meeting the very first thing they considered in going over the brief submitted to them was whether or not this was the time to submit that bill. I thought it was the consensus of opinion of the committee that it is the time.

As chairman of the Legislative Commission I would rather be instructed as to that. I think it is putting a little too much responsibility on any commission of five to decide whether or not they want to introduce any legislation. We were appointed to submit a bill to the Council, which we have done, and then it was to be submitted to the House of Delegates, which is being done. We want to know whether they like it or not, whether they want us to introduce it or not. I don't think it should be left to us. I am not afraid of the responsibility, but that is asking too much of the commission of five. I thought that was decided by the special committee and I thought the report, as I understood it when I sat and listened to the motion, was simply that they recommended that the delegates approve the bill as now printed, that they give the Council and the Commission the further authority to add amendments that might be suggested by members, and some of them were suggested this afternoon, that they be added and that the bill be then presented to the legislature.

Dr. C. F. Moll (Genesee): I want to confirm what Dr. Kiefer has just said. As a member of this committee, we met in joint session this afternoon. One of the first points that came up was, "this is the propitious time to introduce this legislation." The consensus of opinion of men who have given this time and study and were familiar with things as they are, thought it was, and we therefore recommended that this committee be given power to introduce this bill at this time, with such changes as they deemed feasible, or that might arise from time to time as occasion demands. That was my opinion of the report that I signed.

Dr. Roger V. Walker (Wayne): I move as an amendment to Dr. Andrews' amendment that it be mandatory to the Commission to submit this bill at the coming legislature.

Dr. A. V. Wenger (Kent): I support the motion.

The Speaker: Dr. Walker moves an amendment to the amendment to the effect that this House makes it mandatory

upon this Commission to present the proposed bills before the coming legislature. Seconded by Dr. Wenger.

Dr. F. T. Andrews (Kalamazoo): Mr. Speaker, if it be the wish of the house I will withdraw my amendment.

Dr. George Hafford (Calhoun): I will accept it, but I can't just see why so much squabble over this. It seems to me it is perfectly clear. I think we are all in favor of this proposed law, and I can conceive, before the next session is over, something might come up whereby this committee would not want to introduce that bill in this session. Under this thing here you have to introduce it. I think it should be left to their discretionary power.

Dr. R. E. Loucks (Wayne): Mr. Speaker, as I understood that, and I will stand to be corrected, this committee reported to the meeting of the House of Delegates recommending that this thing be done. Then I understood that was to be passed on to the Commission, and the Commission was going to have the bills brought before the House, if I remember rightly. Everybody in this delegation is working for the State Society of Michigan, and the Commission does not wish to be handicapped with any side issues, I don't believe. I wouldn't want to be if I were on the committee. Leave it to their judgment. The men who have been appointed on the committee have good judgment, and I think it should be left to them as to whether or not that should be presented at this time. They are going to be advised by somebody within the circle whether it is a good time to present it or not. If it is not a good time, they are not going to present it. They have the interest of this Society at heart. I don't think we should handicap them with anything like that because I have explicit confidence in their judgment.

Dr. C. F. Moll (Genesee): The question on the amendment, Mr. Speaker.

The Speaker: The amendment before the House, the first amendment having been withdrawn, is Dr. Walker's motion making it mandatory upon the Commission to present the bill at the coming legislature. Are you ready for the question?

Dr. Roger V. Walker (Wayne): That is a reiteration of Dr. Walker's amendment, then. I make a motion to the effect that the Commission introduce this bill at the coming legislature unless some unforeseen obstacle arises. That is the whole point. I will withdraw my amendment then.

Dr. H. J. Pyle (Kent): I should like to have Dr. Walker repeat his remarks because I couldn't hear them.

The Speaker: In brief, Dr. Walker withdrew his amendment.

Dr. Roger V. Walker (Wayne): Dr. Kiefer, apparently, as the Chairman of the Commission, wanted some definite instructions.

The Speaker: Only the original motion is before the House at present, which directs the Commission to proceed with the presentation of the bill, but as I understand it, leaves them the loop-hole if unforeseen circumstances should arise it is not absolutely necessary for them to present the bill at the coming legislature. Is that your understanding, Dr. McIntyre?

Dr. J. E. McIntyre (Ingham): Mr. Speaker, that leaves it as it was, as we recommended it, I believe. May I read this again? "Your Committee, appointed to consider the proposed bills submitted by the Legislative Commission, met in joint session with the Council and the Legislative Commission. After considerable discussion and careful consideration of the brief submitted by the Council, your Committee begs to report as follows: We recommend that the bills as submitted be approved by the House of Delegates and that the Legislative Commission and the Council be authorized to add such amendments as may be submitted to them by the members of the Michigan State Medical Society, if in their judgment the amendments and changes are deemed valuable, practical and advisable, and that the bills be prepared for introduction into the legislature."

Dr. W. J. Wilson (Wayne): Does acceptance of this report authorize the Commission to present this, or does it command them to present it? It seems to me the report is simply a recommendation to present it.

The Speaker: There is the word "authorize."

Dr. F. T. Andrews (Wayne): I move that this report be mandatory at this session. There is no use quibbling and fiddling. Let's get down to business and do something.

Dr. C. H. McClintic (Wayne): I rise to point of order. There is a motion before the house.

The Speaker: The point of order is well taken.

Dr. Wm. J. Cassidy (Wayne): I make

my motion as an amendment to Dr. McIntyre's motion.

The Speaker: The motion has been made requiring the Council and the Commission to pass this bill modified as they may deem advisable before the next legislature.

. . . The motion was seconded by Dr. Roger V. Walker, Wayne. . . .

The Speaker: Is there any further discussion?

. . . The question was called for. . . .

The Speaker: We will vote first upon the amendment of Dr. Cassidy making it mandatory that the Commission present the bill as modified by the Commission and Council to the next legislature. All in favor say "aye"; contrary. The motion is carried.

You will now vote upon the motion as amended.

Dr. C. M. Williams (Alpena): This bill is divided in two sections, one of which is the Basic Science Law which I think we are all agreed upon; the other, that we are said to have a very fine law as is. It has not been put to the test which we are capable of doing. I am not in favor of the passage of this resolution at all. I am in favor of continuing and probably presenting at this Legislature our Basic Science Law with such amendment as we need. I think we should have them.

Dr. C. T. McClintic (Wayne): There is one thing I think should be explained. In several audiences that this has been discussed, this bill prescribing the pre-medical requirements for any one who studies any type of healing has been described as the Basic Science Law. I should like to disabuse the delegate's mind of the fact that it is not Basic Science Law. We rejected the Basic Science Law as written in other states, and we have gone back further and are trying to prescribe the requirements of individuals who are taking up medicine. I am not offering that as an objection, but merely trying to remind the delegate of the fact. The first question raised this afternoon was whether it was advisable to present this legislation or these bills to the next legislature.

Dr. Kiefer and those of us who have been working on this since March, are of the opinion that now is the time to present this legislation, during the next legislature, because the governor has expressed himself as entirely in sympathy and has even offered to help us get it before the civic

bodies in order to create enough public opinion to put it across.

For that reason, I feel the recommendations of the committee as originally made were entirely sufficient, namely that we should present this at the next meeting of the legislature, which is this winter. That is already provided for and I see no reason at all for the extraneous motions and amendments that have been offered.

... The question was called for: ...

The Speaker: The question is on the adoption of the Committee's report as read and amended, by requiring the introduction of these bills before the coming legislature. All those in favor of the motion will signify by saying "aye"; contrary. The motion is carried.

Hospital Survey Committee Report, Dr. Sample.

... Dr. J. T. Sample (Saginaw) read his report. ...

Your Committee to review the report of the Hospital Survey, begs to submit the following report:

1. We admired the able and scholarly character of this report and appreciate the time and effort expended by the Committee.

2. We recommend that this report be accepted as read and as the committee feels that it has fulfilled its function, that it be discontinued.

John T. Sample, *Chairman*.
Dr. Keyport,
Dr. William,
Dr. Spalding,
Dr. Reeder.

Dr. J. T. Sample (Saginaw): I move the adoption of this report.

Dr. C. S. Gorsline (Calhoun): I second the motion.

Dr. E. C. Baumgarten (Wayne): Mr. Speaker, did I understand the doctor to recommend that the committee be discharged?

The Speaker: Yes.

Dr. E. C. Baumgarten (Wayne): After hearing Dr. Smith's report this afternoon, it was marvelous, especially to those of us who heard the report last year, the thought came to me there appeared a great many recommendations that were made there, and I know we would hate to see all this work that has been done on this thing go by the way.

I wonder whether it would be advisable to continue this committee in sort of an advisory capacity, because I don't believe

this thing is exactly a dead issue, at least, it should not be; whether it would not be better for the committee to be continued, as I say, in an advisory capacity, to watch this thing as it goes along and do what they can in order to bring about a realization of the recommendations they have made, because certainly a lot of work has been done on it.

Dr. J. T. Sample (Saginaw): I should like to hear from Dr. Smith myself. Let's hear from Dr. Smith on it.

The Speaker: Is Dr. Smith in the room? He is not present.

Dr. Wm. J. Cassidy (Wayne): When I brought this matter up before the House of Delegates about three years ago I little realized we would receive such a voluminous, unbiased, equitable report as we have received. In view of this fact I think it would be wise to retain this investigating committee as a part and parcel of the Michigan State Medical Society. Hospitals, like every other thing, run amuck. There is no one individual that can do it. You must have a committee who is not afraid to give credit where credit is due, who are still not afraid to censure, where censure is due. This committee report is an absolute fair, square, unbiased report. Let's continue the committee and give them a vote of thanks for the most excellent report which has come before this session or any previous session in the last few years.

Dr. A. O. Brown (Wayne): I should like to move that this motion be amended, changing the word "discontinued" to "continue." That the committee be continued.

... Supported by Dr. H. J. Pyle, Kent. ...

The Speaker: The amendment has been made to change the word "discontinue" to "continue." Any further discussion?

... The question was called for. ...

The Speaker: The motion before the House is the amendment to change the word "discontinue" to "continue." All in favor say "aye"; contrary. The motion is carried.

The original motion to be voted upon as amended is that the report of the Hospital Survey Committee be accepted and that the committee be continued.

Is there any further discussion? All in favor of the motion say "aye"; contrary. The motion is carried.

The committee upon the Nurses' Training Report, Dr. W. J. Smith. Dr. W. J. Smith became ill this afternoon and he delegated Dr. Insley to present the report.

Dr. S. W. Insley (Wayne) : Mr. Speaker and House of Delegates: The committee appointed to study and summarize on the work and recommendations of the Committee on Nursing Education, begs to report as follows: First, that the aforesaid committee must be highly complimented and thanked for the very time-consuming and exhaustive research, and second, that we further advise your adoption of the recommendations in their entirety and as set forth in the published report. Signed,

W. J. Smith,
S. W. Insley,
N. B. Colvin.

I move the adoption.

The Speaker: Dr. Insley moves the adoption of the report of the Committee on Nurses' Training.

Dr. C. F. Moll (Genesee) : I support the motion.

The Speaker: Any discussion? If there is no discussion the motion will be put, the adoption of the Committee on Nurses' Training report. All in favor please say "aye"; contrary. The motion is carried.

The Business Committee has a supplementary report to make. Dr. Shaw.

Dr. Milton Shaw (Ingham) : Your Business Committee wishes to give this supplementary report. The committee recommends the names of V. M. Huntley of Lansing, C. J. Ennis of Sault Ste. Marie, A. Nyland of Kent, and W. H. Haughey, Sr., of Battle Creek, for honorary life membership in the State Medical Society as nominated by the members of the Council.

The Speaker: Are there any other committees or reference committee that have any reports to make? There are no other committees to report.

NOMINATION

The Nominating Committee will render their report. Dr. McIntyre.

Dr. J. E. McIntyre (Ingham) : Mr. Speaker and Members of the House of Delegates: Your Nominating Committee hereby presents the following report:

First Vice President, Richard R. Smith, Grand Rapids.

Second Vice President, Dr. Inch, Grand Rapids.

Third Vice President, Dr. Keyport, Grayling.

Fourth Vice President, E. F. Webster, Sault Ste. Marie.

Delegates to the A. M. A.: Dr. C. S. Gorsline of Battle Creek, Dr. J. D. Brook

of Grandville, and on the delegate to succeed Dr. Hirschman, retiring, the committee returns two reports, a majority and minority report. The majority report is Charles Van Amber Brown of Detroit, three; minority report is Dr. A. W. Hornbogen of Marquette, two.

Alternates, C. E. Boys of Kalamazoo, J. G. R. Manwaring of Flint, and J. E. Wessinger of Ann Arbor.

Your Committee recommends the city of Jackson, Michigan, for 1929. Signed, Southwick, Hafford, McIntyre and Perry.

Dr. George Van Amber Brown (Wayne) : I certainly appreciate the honor of having my name presented as it has been. However, I never accept any position I think I could not fill well, and I, therefore, respectfully request my name be withdrawn.

The Speaker: Dr. Brown has withdrawn his name from nomination for delegate to succeed Dr. Hirschman.

Gentlemen, what is your pleasure with the report of the Nominating Committee?

Dr. C. F. McClintic (Wayne) : I move the adoption of the report.

Dr. C. F. Moll (Genesee) : I second the motion.

The Speaker: Dr. McClintic moves the adoption of the report; seconded by Dr. Moll.

Dr. C. F. Moll (Genesee) : Mr. Speaker, inasmuch as there are no oppositions to any of these names, I make a motion that the Secretary be instructed to cast one ballot for the entire list.

The Secretary: Mr. Speaker, you should, for your official record, show the election of the various officers separately. You can show your Vice Presidents in a group, your delegates in a group, and the alternates.

Dr. C. F. Moll (Genesee) : Mr. Speaker, I withdraw my motion and make a further one that the Secretary be instructed to cast one ballot for the four candidates for Vice President.

Dr. G. H. Southwick (Kent) : I second the motion.

Dr. C. F. McClintic (Wayne) : My motion was that we adopt the report of the Committee.

The Speaker: The motion before the House is Dr. Moll's, seconded by Dr. Southwick, accepting the report of the Nominating Committee. All those in favor, please say "aye"; contrary. It is carried.

We will now proceed with the election of

each individual or group of those nominated.

Dr. C. F. Moll (Genesee) : Mr. Speaker, a motion is now in order that the Secretary be instructed to cast one ballot for four candidates as nominated and recommended by the Nominating Committee for Vice President.

Dr. G. H. Southwick (Kent) : I second the motion.

The Speaker: It has been moved and seconded that the Secretary be instructed to cast the unanimous ballot for the four nominees for Vice President. All in favor of the motion, please say "aye"; contrary. It is carried.

The Secretary: Mr. Speaker, your Secretary does so cast.

The Speaker: I declare them elected.

Dr. A. V. Wenger (Kent) : I make a motion that the Secretary be instructed to cast one ballot for the three named as delegates to the A. M. A., Doctors Brook, Gorsline and Hornbogen.

Dr. H. J. Pyle (Kent) : I second the motion.

The Speaker: It has been moved and seconded that the Secretary be instructed to cast the unanimous ballot for the three nominees for delegates to the A. M. A.

... The motion was put to a vote and carried. ...

The Secretary: Mr. Speaker, your Secretary does so cast.

The Speaker: They are declared elected.

Dr. C. F. McClintic (Wayne) : Mr. Speaker, I move the Secretary be instructed to cast the ballot for the alternates, Doctors Boys, Manwaring and Wessinger.

... The motion was seconded by Dr. Andrews. ...

The Speaker: It has been moved and seconded that the Secretary cast the unanimous ballot of the House for Doctors Boys, Manwaring and Wessinger as alternate delegates to the A. M. A.

... The motion was put to a vote and carried. ...

The Secretary: Mr. Speaker, your Secretary does so cast.

The Speaker: They are declared elected.

On the place of annual meeting, the Committee recommended Jackson.

Dr. C. S. Clarke (Jackson) : I wish to move the Secretary cast the ballot making Jackson the next meeting place of the State Society.

Dr. W. C. Ellet (Berrien) : The House of Delegates should at least hear where other invitations are from.

The Speaker: They should. There were a number of invitations. Will the Chairman of that Committee tell the House what cities invited us to meet?

Dr. J. E. McIntyre (Ingham) : Mr. Speaker, I will try to recall them. They are in the brief-case in my room. Berrien County, Benton Harbor and St. Joseph, Grand Rapids, Saginaw and Jackson.

The Speaker: Does that answer the question?

Dr. W. C. Ellet (Berrien) : Mr. Speaker, I should like to move that the House of Delegates, as a whole, be allowed to consider at least one or two of these other invitations and vote on them.

The Speaker: The motion before the House is to accept the Committee's recommendation to hold it in Jackson, but the motion is open for free discussion.

Dr. W. C. Ellet (Berrien) : I make an amendment to that motion that the other cities be allowed to present their invitations to the House of Delegates, and that the motion be voted on, that is, as to the choice of city.

The Speaker: Dr. Ellet's amendment to the motion is that the list of invitations received be voted upon by ballot.

... The motion was seconded. ...

Dr. C. S. Clarke (Jackson) : May I ask, as a matter of information, if there is any set rule by which nominations are made by the Nominating Committee rather than from the floor of the House of Delegates?

The Speaker: Are you speaking of nominations?

Dr. C. S. Clarke (Jackson) : I noticed that the program says it is the duty of the Nominating Committee to nominate a place of meeting for the following year. I would assume from that that the nomination should come from that Committee. I just ask if I am right on that.

The Speaker: The Nominating Committee makes only nominations. The parliamentary rule is, of course, any additional nomination is made from the floor of the House. The House may do as it chooses with the report or recommendation.

Dr. George Hafford (Calhoun) : May I explain that your Nominating Committee, under the instructions given to us in the program and after careful consideration of all the invitations, decided on Jackson because it was pretty centrally located and

had pretty good advantages. I am not sure that in accepting the report of the Nominating Committee you have not already chosen that city.

The Speaker: Dr. Hafford, the report of the Nominating Committee has been accepted, but no selection has been made. The nominations of the Nominating Committee do not elect these names to the various offices. If there is some difference of opinion in the House as to where they wish to meet, here is your opportunity to discuss it. Dr. Ellet's amendment was to the effect that the selection of the meeting place should be by the House as a whole, by ballot.

Is there any further discussion?

Dr. G. H. Southwick (Kent): Mr. Speaker, it seems to me the Nominating Committee considered this carefully, as we feel we did this afternoon. Kent County felt they had some claim to the 1929 meeting; Saginaw put forth a very pressing invitation, Berrien County was the same. We decided Jackson has not had the meeting since 1903. It was pretty centrally located, and after much discussion it was decided that was the best thing to recommend to the House of Delegates. Therefore, if you gentlemen will give your support to Jackson, which we on the Nominating Committee felt was due, I believe we would be carrying out the wishes of the Nominating Committee after just consideration.

Dr. N. B. Colvin (Oakland): I am going to vote for Jackson, but I think any man on this floor has a right to nominate any other city he wishes to. I remember three years ago, when Dr. Brook was put forward by the Nominating Committee, somebody got up and said they wished to vote for him, and he was elected. I remember that very distinctly. Maybe it wasn't right, but it seems to me it was about right.

The Speaker: Have you nominated direct from the floor of the House, Berrien County, Saint Joe and Benton Harbor?

Dr. W. C. Ellet (Berrien): Yes, sir, the motion was made and I amended it that the other cities which put in invitations for the state meeting for 1929 should be put in on the ballot and the ballot cast, and the one who is unanimous be allowed to have the convention. It was supported.

The Speaker: If you nominated them, there isn't any further question about it. It is the privilege of anybody to make further nominations from the floor. The Committee merely makes the nomination.

There are, therefore, two nominees for the House, Jackson and Benton Harbor-Saint Joseph.

Dr. J. T. Sample (Saginaw): What about Saginaw? I should like to nominate Saginaw.

The Speaker: Dr. Sample nominates Saginaw.

Dr. J. D. Brook (Kent): Mr. Speaker, I nominate Grand Rapids for holding the meeting.

Dr. J. C. Kenning (Wayne): I move that the nominations be closed.

. . . Supported by Dr. William J. Cassidy, put to a vote and carried. . . .

The Speaker: The Chair appoints as the Tellers' Committee, Dr. Ellet, Dr. Sample and Dr. C. S. Clarke.

Dr. N. B. Colvin (Oakland): I rise to a personal privilege. I want to tell you that in 1931 Oakland County will have been organized for one hundred years, and the Oakland County Medical Society was organized one hundred years ago. One year ago we had \$80 in the treasury. Now, that is one thing we feel proud of. So, we are going to celebrate in 1931 and we would like to have the Michigan State Medical Society come to Oakland County that year and celebrate with us. I know your committee has not been appointed and assigned the question, but keep it in mind.

The Speaker: Has everybody voted who wishes?

If so, the ballot is closed and the tellers will count the vote.

The Speaker acknowledges the courteous invitation of Dr. Colvin to meet in Oakland County in 1931 on the one hundredth anniversary of the founding of the County's Medical Society. Dr. Colvin's invitation will be placed on file.

The Chair wishes to state, while we are waiting for the report of the Ballot Committee, you might consider the next thing that will come up before the House, and that is the election of members of the Council from the Eleventh and Twelfth Districts. The Secretary has not yet received any nominations from the delegates from the constituent county societies. Therefore, it comes before the House as in open session. The counties of the Eleventh District are Mecosta, Montcalm, Muskegon, Oceana, Newaygo, Osceola and Lake, to succeed Dr. George LeFevre of Muskegon.

The constituent county societies of the Twelfth District are Chippewa, Luce, Mackinaw, Delta, Dickinson-Iron, Gogebic,

Houghton, Baraga, Keweenaw, Ontonagon, Marquette-Alger, Menominee and Schoolcraft, to succeed Dr. Richard Burke of Palmer.

Dr. A. P. Biddle (Wayne): I move we elect Dr. LeFevre.

The Speaker: I just mentioned this informally during the recess so you could give it thought.

The Secretary: Mr. Speaker, the result of the ballot is:

Saginaw, 2; Grand Rapids, 2; Benton Harbor, 15; Jackson, 37. (Applause).

The Speaker: Jackson has the majority vote in the selection of place for meeting next year.

The Secretary: Mr. Speaker, the Council requested the House to designate whether the society wished to hold its meeting in the spring or the fall of the year. It might be well for the House to instruct the Council to use its best judgment after conference with the profession of Jackson whether this meeting should be held in the spring or fall and leave that authority of selection to the Council.

Dr. C. M. Williams (Alpena): I move that this question of the time of meeting be left to the Council for their decision.

Dr. J. E. McIntyre (Ingham): I support that motion.

The Speaker: It has been moved that the selection of the time of the next meeting be left to the Council after consultation with the local county society. Is there any discussion?

... The motion was put to a vote and carried. ...

The Secretary: Honorary Members: Huntley, Lansing; Ennis, Sault Ste. Marie; Nyland, Kent; Haughey, Sr., Battle Creek.

Dr. J. D. Brook (Kent): I move that the names as written on the board be elected to honorary membership in this Society.

Dr. J. T. Sample (Saginaw): I support the motion.

Dr. J. E. McIntyre (Ingham): I should like to suggest this be done by rising vote.

Dr. C. S. Gorsline (Calhoun): Speaking particularly of Dr. W. H. Boys of Battle Creek, the Calhoun County Society has already made him an honorary member of the county organization in token of our respect and appreciation of the work he has done, not only in the County Society, but at the time he was very active in the State Society.

Dr. George Hafford (Calhoun): I move that the Secretary be instructed to cast the ballot.

The Speaker: There is a motion like that before the House now. It has been moved that the Secretary be instructed to cast the unanimous ballot for these four nominees for honorary membership in the Michigan State Medical Society.

Dr. C. F. McClintic (Wayne): I don't recall the doctor mentioning the Secretary cast the ballot. I suggested we do it by rising vote.

Dr. C. F. Moll (Genesee): I support Dr. McClintic's motion.

The Speaker: Dr. McClintic moves we elect them by rising vote. All in favor of the motion will stand up.

... The House arose. ...

The Speaker: They are unanimously elected.

The Secretary: Mr. Speaker, the term of Councilor of the Eleventh District, Dr. LeFevre of Muskegon, has expired. We have been unable to secure the delegates from that district to nominate any successor. It is, therefore, open to the House to make nomination for the Councilor for the term of office held by Dr. G. L. LeFevre of Muskegon.

Dr. A. P. Biddle (Wayne): I nominate Dr. LeFevre to succeed himself.

Dr. C. S. Gorsline (Calhoun): I second the nomination.

The Speaker: Dr. Biddle nominates Dr. George LeFevre to succeed himself in the Eleventh District. Are there any other nominations?

Dr. C. F. McClintic (Wayne): I move the nominations be closed.

... The motion was supported by Dr. Wm. J. Cassidy of Wayne. ...

The Speaker: It is moved that nominations be closed and that the Secretary be instructed to cast a unanimous ballot for Dr. LeFevre to succeed himself.

... The motion was put to a vote and carried. ...

The Secretary: I so cast the ballot.

The Speaker: He is declared elected.

The Secretary: The same is true with Dr. Burke in the Upper Peninsula.

Dr. Perry: I wish to place in nomination the name of Richard Burke of Palmer.

Dr. W. E. Thompson (Schoolcraft): I wish to second the nomination.

The Speaker: Are there any further nominations?

Dr. J. E. McIntyre (Ingham) : I move that the nominations be closed and the Secretary be instructed to cast the ballot.

Dr. F. T. Andrews (Kalamazoo) : I second the motion.

The Speaker: Dr. Burke has been nominated for Councilor of the Twelfth District.

. . . The motion was put to a vote and carried. . . .

The Secretary: Your Secretary does so cast.

The Speaker: He is declared elected.

The Secretary: Mr. Speaker, the next order of business is the nomination of Speaker and Vice-Speaker of the House.

Dr. F. T. Andrews (Kalamazoo) : I take great pleasure in nominating the Speaker we have had this session, Dr. Henry Carstens, for the next coming year.

Dr. Wm. J. Cassidy (Wayne) : I take pleasure in nominating a gentleman from the upper part of the state, a middle part, whose volume is so large he can be heard all over the room. He has a strong right arm and we will have pretty good order. I should like to nominate my genial friend, Dr. Pyle of Grand Rapids.

The Speaker: Gentlemen, I appreciate the nomination to succeed myself very, very much, but, nevertheless, I wish to withdraw my name. I had the pleasure of serving you last year as Vice-Speaker and this year as Speaker, and personally I feel it well that the precedent should not be established of holding office continuously. I have been honored by serving you once, and I should prefer to withdraw my name.

Dr. C. F. Moll (Genesee) : I take great pleasure in seconding the nomination of Dr. Pyle of Grand Rapids as Speaker of this House.

Dr. C. F. McClintic (Wayne) : I should like to move that nominations be closed and the Secretary cast the unanimous ballot for Dr. Pyle.

. . . Supported by Dr. B. H. Priborsky (Wayne), and Dr. R. E. Loucks (Wayne), put to a vote and carried. . . .

The Secretary: Your Speaker does so cast.

The Speaker: The Speaker will call upon Dr. Pyle.

Speaker-Elect Pyle: In an organized mass of medicine there is no place for a story. It is business, and I assure you I am not able to make a speech, but this morning when this Committee reported we were all sitting in the dark and our genial

President, Dr. Randall, went way down from Moses to Grover Cleveland, I was impressed with the power of organized medicine. Let us go home now. Let us have medicine more organized than ever before, because if the public could only know the altruistic motives as taken from the reports all the way down, they would be impressed. I choose to serve. (Laughter and applause).

The Speaker: Nominations for Vice-Speaker of the House of Delegates.

Dr. R. D. Thompson (Kalamazoo) : I nominate Charles Morris.

Dr. W. C. Ellet (Berrien) : I support the nomination.

Dr. F. T. Andrews (Kalamazoo) : I support the motion.

Dr. Wm. J. Cassidy (Wayne) : I move the nominations be closed.

The Speaker: Dr. Cassidy moves the nominations be closed and the Secretary instructed to cast the unanimous ballot.

. . . The motion was seconded by Dr. C. F. McClintic (Wayne), put to a vote and carried. . . .

The Secretary: Mr. Speaker, your Secretary does so cast.

The Speaker: He is elected. I will ask Dr. Morris to stand up. (Applause).

Is there any unfinished business to come before the House?

Dr. C. S. Clarke (Jackson) : It is with a great deal of regret that I have to bring to the notice of this body the death of Dr. A. E. Bulson of Jackson, which you heard about one month ago. Dr. Bulson was an ex-president of our society and I am informed that he was one of the founders. I should like to move that the Secretary of this society write a letter of sympathy to his family.

The Secretary: Mr. Speaker, that has already been done, as was also a wreath sent at the time of the funeral, and acknowledgment was also received from his widow and also from his son, Dr. A. E. Bulson, Jr., of Indianapolis.

Dr. C. S. Clarke (Jackson) : I offer my apologies for my ignorance.

The Speaker: Is there any other unfinished business? You have nothing more, Mr. Secretary.

The Secretary: There is no unfinished business, Mr. Speaker, upon the Secretary's desk.

The Speaker: The House authorized the appointment of a committee of five to go to Lansing and confer at this large gath-

ering at which time new legislation in connection with the Crippled Children's Bill was to take place. The committee will be:

Dr. B. R. Corbus, Chairman; Dr. Richard R. Smith, Dr. A. D. Laferte, Dr. A. J. Bower, Dr. J. B. Jackson.

If there is no other business before the House, a motion to adjourn *sine die* is in order.

Dr. Charles Morris (St. Joseph): I move we adjourn.

. . . The motion was seconded, put to a vote and carried. . . .

. . . The meeting adjourned *sine die* at 9 o'clock. . . .

F. C. Warnshuis, *Secretary*.

REPORT OF COMMITTEE ON THE HOSPITALIZATION OF MENTAL PATIENTS

Recognizing that mental disorders are one of the most important concerns of the state as problems of public health; and that the treatment and care of these disorders belongs fundamentally in the field of medicine.

Your committee would respectfully direct attention to the present situation which exists in this state in respect to hospital facilities for the care of the insane and mentally disordered.

The state of Michigan fifty years ago assumed the responsibility for the care of the insane.

Until 1915 facilities for the care of the insane in Michigan compared favorably with those of other states. In that year Michigan had available 285 beds per 100,000 population. Even with this rate all hospitals were crowded beyond their hygienic capacity. Since then Michigan has increased greatly in population but this increase in population has not been met by any proportionate increase in facilities for the care of the insane.

The rate of hospital beds to population, on the contrary, has greatly decreased until in 1927 this rate is only 213 beds per 100,000. Michigan ranks sixth in population in the United States but there are twenty-eight states that provide higher rates of beds for the care of the insane than Michigan.

States which have the best developed facilities for the care of their insane have found it necessary to provide from 383 to 399 hospital beds for each 100,000 of the population.

The state of New York has one hospital bed for each 262 of its population; Massachusetts has one hospital bed for each 251 of its population; *Michigan has one hospital bed for each 469 of its population.*

Between 1919 and 1926 there were added by new construction for the care and treatment of the insane in the entire state, 1,033 beds. Of these, 920 were provided by Wayne county for its mentally sick at Eloise, and only 113 beds were provided by legislative appropriations for the state at large.

The results of this long existing deficiency in hospital facilities are:

1. All hospitals for the insane are crowded beyond their capacities. Several hospitals have waiting lists of patients who have been committed, but cannot be received. This is especially true in the Pontiac district.

2. Many insane citizens of the state who urgently need treatment are being cared for in their homes and inadequate surroundings. Insane

persons are frequently cared for in jails. Many insane persons are at large in the communities who should be in hospitals. Often these people are a social menace. Serious crimes committed by insane persons have recently occurred in the state and will probably increase.

3. Physicians having in their practice patients with mental disorders are often unable to have these afflicted persons received into State Hospitals in the early stages of their disorder when treatment is most efficacious.

4. Probate courts are avoiding commitments to hospitals because there is no room for the insane in the State Hospitals.

The only remedy for this situation is an immediate increase in hospital facilities.

The addition of a few beds to existing hospitals will not meet requirements. A comprehensive building program should be undertaken by the state which will meet immediate needs and provide for the future.

This program should be formulated in harmony with what modern progress has shown to be adequate methods of providing for the treatment and care of the insane.

Michigan requires an addition of approximately 4,500 beds to its present hospital facilities for the treatment and care of the insane. This increase would raise the rate of hospital beds from its 1927 level of 213 beds per 100,000 population to 312 beds per 100,000 population and would provide one hospital bed for each 320 of the population of the state.

Included in any program for increasing facilities for the care of the mentally disordered in Michigan should be provision for a new building for the State Psychopathic Hospital. The small size and inadequate facilities for this institution have long been apparent and should receive immediate relief. The value of this institution to the state has been amply shown in the years of its existence, as a hospital providing for the treatment of special classes of mental disorders and as a center for the teaching of psychiatry.

These 4,500 beds would require the erection of a new state hospital for the insane with a capacity of 2,500 patients, and the addition of about 2,000 beds to existing state hospitals.

Equally deplorable is the lack of facilities for the care of the feeble-minded and epileptic. The two existing institutions for these classes are crowded to their limit and each has long waiting lists of patients who have been committed, but cannot be admitted.

To provide for urgent immediate needs and for the certain requirements of the near future, there is needed an additional training school for the feeble-minded, with a capacity of 2,500 beds; and an increase of 1,200 beds at the Michigan Farm Colony for Epileptics.

Your committee would recommend the adoption of this report. It would further recommend that the House of Delegates of the Michigan State Medical Society take some definite action that will assure active efforts from this association and its individual members, towards securing administrative and legislative provisions that will provide adequate hospital facilities for the mentally disordered in this state.

G. F. INCH,
LEO DRETZKA,
ALBERT M. BARRETT

HOSPITAL ADVISORY

The Hospital Advisory Committee appointed by you have visited the following hospitals during

the year; St. Lawrence Hospital, Lansing; Mercy Hospital, Bay City; St. Mary's Hospital, Saginaw; Evangelical Lutheran Hospital, Detroit. Reports have been rendered on these hospitals to the Council on Medical Education and Hospitals, Chicago. A personal conference with Dr. Caldwell was had at his office so as to learn the duties of the committee. Inspections of these hospitals was made with the assistance of some member of the committee living in the vicinity.

C. M. WILLIAMS, *Chairman*

REPORT OF COMMITTEE ON CIVIC AND INDUSTRIAL RELATIONS

Last year this committee made no report. This year we shall make our report rather brief, very brief in fact, considering the great number of problems that might come within the sphere of this committee and the considerable scope and importance of many of these problems.

Only a few of these which involve the medical profession quite intimately will be briefly presented.

In the minds of most of the members of the committee, the question of free clinics of all types seems to be the first consideration.

Perhaps the type of clinic most severely criticized by the committee is the one started and conducted by some of the various welfare agencies or social uplift enthusiasts, when the doors are opened so wide and the clinic is advertised so much that a very substantial number of patients of ample means are found within the portals, taking advantage of the bargain counter conditions.

Where these clinics are needed and are doing good work, we are not disposed to discourage their continuance, but we are disposed to recommend that in all such clinics the sifting of these cases be carefully done, so that the financially competent individual shall become a very rare flower in this habitat.

The clinics in many of the hospitals are so conducted as to exclude patients who can pay, and yet it is not amiss, I think, to emphasize the need of watching for either wilful or innocent abuse of the system. Frequently cases are given first aid at some hospital. Those who have funds are sent to their physician, but how about the occasional or frequent case which is covered by insurance? This type of case should not be continued in a free clinic. If they are it will merely be putting that much money in the pocket of some insurance company.

Another angle of this problem is supplied by School Boards who, in some of the towns of the state, are asking the doctors to administer toxin-antitoxin for nothing or at a ridiculously low figure. This does not seem at all fair or right, because it establishes this nominal price as the standard for such service in that community. The children should be given the choice of going to their own physician or to the school physician, and if they go to their own physician, they should pay the normal price.

In communities having no school physician, some local medical man could be asked to function in that capacity, and paid by the School Board.

Before leaving this subject of clinics which has constantly been with us and will continue to be with us, it is well to recognize the rapid growth of another form of competition through the establishment of first aid stations and hospitals in many of the industrial plants.

Full time medical men, nurses and first aid men have become a part of the industrial system. On

the part of most of these industrial physicians I believe there is a tendency to deal fairly with the men outside and not to extend their services beyond the employe himself, nor to include injuries or illnesses not "incurred in line of duty."

This is, however, a development which we can well scrutinize carefully and watch with more than passing interest, for here we have an organization of medical service by the corporation for the benefit of the employe and for the protection and profit of the corporation. Suppose in the near future that the corporation comes to feel that the employe will be happier and freer from worry and therefore a better workman if he and his whole family are provided with medical service. Is that an impossible or absurd contingency?

Leaving for a time the big subject of clinics without at all having dented its surface, we wish to mention two other things. One is the old matter of insurance companies paying only \$3.00 for examinations and asking for opinions without any compensation. This absurd thing should be somehow overcome, and could be without doubt if all the County Societies in the state were willing to adopt some sort of agreement covering fees for insurance examination and notifying the various companies of their position in the matter.

One other matter of importance should receive our serious consideration and that is the tremendous increase in *traffic accidents* and the rather appalling percentage of these cases that are unable to pay anything at all to the surgeon who cares for them.

Our committee believes that the state of Michigan should require some adequate insurance or bond from every car licensed in the state covering liability as well as property damage.

This report is becoming sufficiently long with a simple recital of a few of our more obvious civic and industrial relations that should be improved. Our suggestions of ways and means of bringing about some improvement are unfortunately more vague than definite, more general than specific.

The Illinois Medical Journal for August of this year carries an article entitled "Private Practice is at Stake." This article sets forth many of the evils of clinics of various sorts, as well as the activities of many boards of health, state legislatures and the national congress; the Sheppard-Towner Act, the Federal Narcotic Act, the Volstead Act, and others, being pointed out as pernicious in their effect upon general practise.

In the course of this paper, the author criticizes very severely some of the so-called "Prominent" men of the profession. Assuming that their point of view is quite at variance with that of the so-called private practitioner, this, I believe is a mistake. The whole question requires a lot of thought by the best minds in the profession, a complete co-operation between the private practitioner and the clinical man, whether the clinics be large teaching clinics, or small board of health clinics in the small towns.

We believe the medical man should be on the job earlier in the matter of clinics, and see that, when they are needed, they are organized properly and safeguarded from abuses.

Regarding the industrial medical organizations, we believe that in every community, the local medical men should give these industrial surgeons the fullest co-operation, both in the matter of accidents and in sickness which involves the working power of the men. We know quite well that it will not be a benefit to industry to have a complete medical organization to care for sickness as

well as accidents and for the families as well as the worker. It is up to us to be awake in this problem as well as the other clinic problems.

We apologize for taking so much time, and also for our failure to make an adequate and complete diagnosis of all civic and industrial conditions which are pathological. But, most of all, we deplore our inability to find and bring to you even one specific remedy for the diseased conditions. We promised generalities and we have redeemed our promise.

C. D. Munro, Jackson
H. S. Collisi, Grand Rapids
R. L. Clark, Detroit
H. M. Joy, Calumet
F. G. Swartz, Traverse City
R. H. Nichols, Holland
W. Den Bleyker, Kalamazoo
H. Dibble, Detroit
L. A. Tarubaue, Pontiac
Chairman

GENERAL SESSIONS

THURSDAY EVENING SESSION

September 27, 1928

The First General Session of the 108th Annual Meeting of the Michigan State Medical Society was called to order in the ball room of the Book-Cadillac Hotel, Detroit, at 7:45 o'clock, President H. E. Randall, of Flint, in the chair, presiding.

President Randall: The meeting will please come to order. The address of welcome will be given by Dr. E. G. Martin, President of the Wayne County Medical Society. Dr. Martin! (Applause).

Dr. E. G. Martin: Mr. President, Ladies and Gentlemen: I assumed that I was going to be embarrassed by a large audience composed of men and women. Instead of that I am embarrassed by a very select audience composed of men and women.

I very carefully noted a very few remarks of rather a formal character which I think I had better read because it is very important that they should be worded just exactly as I have written them—not so very important, but quite so.

As President of the Wayne County Medical Society and in behalf of its members, I wish to extend to the members of the Michigan State Medical Society and its guests our most cordial welcome and our most sincere greetings. That is the only part that I was particular about.

I should say that this being the 108th anniversary, that one hundred and eight years is a long time for a society to have carried on and it speaks well for its purposes.

I inquired somewhat, never having made an address of welcome, as to just what the character of such an address should be and I was advised that I should call attention

to the various and many blind pigs in the city so that the delegates and members might avoid them and to point out that where you see the signs, the large signs, "Closed by the United States Prohibition Department," on the front of a building, you would find that blind pig, so you can avoid it, right next door or directly across the street. That has been the usual custom for them to move next door, so that business won't be disturbed and their customers won't be inconvenienced.

However, I am not going to say anything about that tonight because I feel that it is an inappropriate time to speak on the subject and the audience probably would not be receptive nor appreciative of such a warning.

The places of interest hardly need be mentioned to men and women who have been to Detroit, other than possibly to mention our various hospitals. Our Detroit City Hospital is a comparatively new hospital, well managed and well run, and subject to a great deal of criticism as all city hospitals are. It is available for your inspection and they are able to present to you there any type of disease, surgical and medical, including mental disease, with very few exceptions, that you might be interested in. I think it would be of great interest for you to visit that institution.

I have been particularly asked to call your attention to our newest hospital and one of the oldest as well, Harper Hospital. The Superintendent wishes me to extend a cordial invitation to the visiting members and their guests to inspect the new hospital. They have entirely moved from the old institution and I personally have an interest in the institution and feel that it is one of the most beautiful and modern institutions that I have ever had the pleasure of inspecting.

I want to refer to the new medical laws merely in congratulating you upon the attendance at this Michigan State meeting when, in my opinion, more important work has been presented as having been partially accomplished by our committees of the State Society than at any time in my experience. I don't think it will be necessary for me in the absence of the Governor to say a great deal. I hoped that he might be present when I might have a few remarks to make on the subject which would be of mutual interest, but I do feel and have been assured that the public have a greater opportunity of having medical laws passed which will be for their protection

during this present and the coming administration than they have ever had before.

I choose to say that the public has a greater opportunity because I believe they are the beneficiaries. The medical profession often is accused of being the beneficiary, but that is not true.

The Secretary of Agriculture visited down in one of our Southern states and after having talked enthusiastically upon his subject for an hour and a half, took a drink of water and continued for some time longer, and, becoming a bit worried, and noticing the unrest that seemed to prevail and grow, he said, "I am sorry, I get so enthusiastic about my subject that I forget myself, and today, unfortunately, I did not bring my watch with me."

Some man in the back of the room called out, "There is a calendar on the wall there." So the gentleman decided it was time to stop, and I should like to close by saying, separately from my welcome to the members of the Michigan State Society and in behalf—I am sure I can speak in behalf of the Woman's Auxiliary—I should like to extend greetings from the members of Wayne County Medical Society and the women of the local auxiliary to the visiting delegates and wives of the doctors.

We feel that we are to be congratulated upon their support. I am not so sure that the word "auxiliary" is not a bit of a misnomer. I am not so sure that maybe they are the whole show and that the regular society is the auxiliary. I think that will have to be determined somewhat in the future.

However, we are mighty glad to see you all. (Applause).

President Randall: On behalf of the State Society, Dr. Martin, we thank you for this very kind and warm greeting and welcome. Mr. Secretary!

Secretary Warnshuis: Mr. President and Members of the Society: Your Secretary has very little to announce at this time except to state that the House of Delegates was in session nearly continually all day yesterday and discussed the problems before the State Society, notably the report of the committee whose survey made by Dr. Richard R. Smith, contains pertinent and important recommendations as to the relations to the public and the relationship of the hospitals to the community of Michigan.

The second important item was that of legislation of which Committee Dr. Guy L. Kiefer was Chairman. Two bills were proposed for introduction at the next ses-

sion of the Legislature. These bills were very, very carefully considered by the members of the House of Delegates and after deliberation they instructed that the Legislative Commission and Council were to introduce this new type of legislation into the next session. It means much to the profession of Michigan, but still more to the people of Michigan because it is a safeguard in the conservation of their health. It also means that the profession as a whole must shoulder to shoulder institute a concerted action that will create before the public of the state as well as the members of our coming Legislature a favorable sentiment for this type of progressive legislation.

Much with regard to this matter will be reported to you through the columns of the Journal and through correspondence with our component County Units.

The report on Nursing Education, which also has an important relationship to the public because it entails a problem of the expense of their ill health, was acted upon by the House of Delegates and the recommendations of that Committee were concurred in. They will be published in the next issue of your Journal.

In addition to that the ordinary elections entered in upon and the place of meeting for our next annual session was selected as Jackson, Michigan.

The members of the society elected as delegates to the American Medical Association are: Dr. J. D. Book of Grand Rapids, Dr. C. D. Gorsline of Battle Creek, and Dr. Hornbogen of Marquette.

They also elected as Honorary Members four of our esteemed men who had served in the ranks of the profession as well as the organized ranks of our Society: Dr. C. J. Ennis of Sault Ste. Marie, Dr. V. M. Huntley of Lansing, Dr. Albertus Nyland of Grand Rapids, and Dr. W. H. Haughey, Sr., first Secretary of the Council of our Society under reorganization in 1902.

The House has adjourned its session and tonight after the President's address, the Governor of Michigan will address you. He will be here presently.

Tomorrow the Scientific Sessions will be resumed at 9 o'clock. At 11:45 tomorrow morning will be the second General Session with the introduction of the President-elect of the Society, and at 12 o'clock our moving picture show will be resumed, which was conducted this afternoon.

That is all the announcements, Mr. President.

President Randall: The subject that I

have proposed to talk about tonight is "The Contribution of Medicine to Modern Civilization."

President Randall presented his prepared address, which was published in the October Journal.

Secretary Warnshuis: Mr. President, His Excellency, the Governor of Michigan!

The members arose and applauded.

President Randall: In the days back a few years ago when Dr. Andrew Biddle and Dr. William T. Dodge belonged to the National Guard of Michigan, a smiling young chap came into the army. He was known to smile no matter what happened. He always came up smiling. He is still smiling, and that smiling chap is now the Governor of the great state of Michigan.

In his own home town they elected him thirteen times to the same office. I want to say in Flint they never re-elect a man. (Laughter). His own home people must think a great deal of Governor Green, and I understand his job is waiting for him when he gets through, either at Lansing or at Washington. I have great pleasure in introducing to you Governor Green of Michigan!

The members arose and applauded.

Hon. Fred W. Green: President Randall, Ladies and Gentlemen: I am very happy to have been invited to be here this evening. I noted with a great deal of pleasure that the other fellows had to read what they had to say, too.

I have been up north, went up there Monday to inspect roads, and I know you won't begrudge me when I tell you that I have only had two days since last November and so when I found myself up there, I laid off a couple of days, and I took the old fishpole, but the fish are still there. (Laughter. I had a lot of fun, but I didn't get any fish.

I am reminded, and I hope you are not, of the old Scotch preacher who invited a blacksmith to church and after many invitations he got him there and the next Monday morning he went around and asked the old fellow how he liked the sermon.

"Well," he said, "there were three things about it I didn't like. In the first place, you read it. In the second place, you didn't read it well; and in the third place, it wasn't worth reading." (Laughter).

For Governor Green's address see first original article, this issue.

The members arose and applauded.

President Randall: A few years ago a

doctor down east wrote three books giving his personal views about almost everything he had ever heard of. In the introduction to one of the books the quotation that I wanted was something like this: "These views represent just the views of one more spectator who has managed to be comfortably useful, comfortably successful, comfortably happy, and who looks forward to a very enjoyable old age."

Now I want to refer to that old age matter. Dr. Morris has taken an interest in the home for doctor as a national organization and I have asked Dr. Morris if he will choose his own subject, but I want him to talk to you for ten or fifteen minutes. Dr. Morris!

Dr. Roger Morris, New York City: Mr. President, Ladies and Gentlemen, members of the Michigan State Medical Society: After hearing Dr. Randall's paper and Dr. Martin's remarks about your new hospital, after hearing the up-to-date papers here today of your active men, I am inclined to be reminiscent, although reminiscence is said to be the first clinical sign of hardening of the arteries. (Laughter).

It was a good many years ago that my old friend, Dr. Vaughan, asked me to talk with Dr. Angell about taking a professorship at Ann Arbor. I thought of the place as possibly a sort of arbor and a good place for rain in there, but as a place where I could have library and hospital facilities, not so well. It did not seem adequate in those youthful days when a young man is in the possessive case. He thinks things are for him and we did not have the example of the Mayos then or the inspiration of the work of so many of you men who now have lighted fires of knowledge and inspiration in your various clinics throughout this country.

It was about 1880 when I first began surgical work. I was still in college but as assistant to Dr. Bull in the out-patient at the Chambers Street Hospital. We really had very active work. When there was a strike on the docks we would have twenty or thirty men brought in with stab wounds in the course of thirty minutes. Sometimes there was a steam explosion with fifteen or twenty brought in, but there were not so many burned as we have now from the popping of stills. At the same time we had a great many and we had very active surgical work 'way back in 1880.

In those days there were few specialists. The equipment of the general practitioner consisted chiefly of a stethoscope, a ther-

momometer and apparatus for determining the presence of albumen or sugar in the certain specimen if we happened to get hold of the right bottle. I remember my old preceptor going into a case of pneumonia, I going in with him, when he had a thermometer, something new, and as we stepped into the room, he took his seat by the side of the patient, put the thermometer in the patient's mouth, proceeded to take his pulse, to look him over in various ways, took the thermometer out, put it in his pocket without looking at it, and knew more about that case than many a man who has a first rate thermometer today.

In those days about the only specialists who devoted themselves entirely to special work were those who devoted themselves to the eye and ear. They were the first "fee-splitters," and that put all specialists outside of the pale of the profession in the estimate of the large, broad-minded, general practitioner of the day, only some who accepted a commission from the dealers in glasses.

In every profession we have the nobility group and the expediency group, and in no part of the profession has the nobility group ever accepted any commission for part of his work.

Since that day specialism has increased by leaps and bounds with such division of the profession that today if I send a patient to seven specialists, to my regret I find that my dear patient has seven diseases. If I send the patient to a heart specialist and he comes back without heart disease, it is because the doctor was not in. (Laughter).

What will be the outcome of this? We need today the general practitioner, guide, counsel and friend of the patient as never before. In an office or in a group where there are a number of efficient specialists together, we have a situation like that in which several lawyers are combined in one office. Do the seven lawyers try a case in court? They do not. It is tried by one man in the office who combines the combined knowledge of his partners, assembles it, and applies judgment or perhaps even may go outside of that firm in order to secure a trial lawyer.

The old general practitioner was the man of judicial mind who assembled the views of the specialists, who used judgment that belonged to his knowledge of the nature of the individual patient, and we need him today. I do not know who is going to take his place.

In the early days I remember when I first began practice, there were about 175 hospitals in the United States. In 1924 there were 6,472. Knowledge in every department of medicine has increased to such an extent that there is no one Alexander Van Humboldt who could comprehend all of the natural sciences of the day. It is impossible to keep up to date even in any one particular field today. Consequently, the development of group medicine is one of the necessities. It has its place. It must come, and we shall continue with group medicine; but in the olden times we had no problems of pay clinics. We had no problems of industrial medicine. We had no problems of state medicine related simply to questions of controlling epidemics and these being in the hands of politicians, we had epidemics of politicians. (Laughter).

Today, as the old practitioner is disappearing, we are gradually developing for him, now developing, a home, and we hope to have a national home for the project that is under way and in which I happen to be very much interested.

We older men are sometimes depended upon still for our opinion. Not long ago I stepped into the operating room where one of my assistants was at work upon a hernia, doing the work very nicely, placing the man back in his field of usefulness so that he might go on with his life work in comfort. Afterward in the hall my young assistant said, "What shall I charge that man for the operation?"

I said, "I don't know. You did the work very nicely, gave him comfort and he is now going to be able to carry on his work the rest of his life. What is his occupation?"

He said, "The man is a burglar. He will pay any bill I ask him to pay, but he will go out and get it. Now how much shall I charge him?" (Laughter).

I am sorry that I couldn't tell the governor a fish story in closing. I am sorry he was disappointed, but I must tell you of two of my young friends, and you can tell it to the governor tomorrow. They went off on a Saturday afternoon full of hope. (This story has rather wide application in the way of hope for all of us.) They started off through the woods, three miles to the lake where they were going to fish for bass. Their mothers put up lunches and everything was prepared for a good day's sport.

When they got to the lake they found they had everything excepting fish hooks.

They found under the strap in the basket an old rusty hook—one—with a sinker, so they drew lots to see who would have the chance to use it and it came that George had the luck. He put some grasshoppers on the hook and they pushed out the boat and in a few minutes there came a tremendous tug on the line that pulled the rod right down under the boat, under the water, and then the line broke. Up came a bass and in the most aggravating way shook the hook and sinker in their faces, but he was free. He went down.

Disconsolate, knowing they were going home without fish, disappointed, they picked up the oars and started back towards shore. The bass gave one more leap. He happened to hit an oar, glanced over into the boat, and when they took that hook out of his mouth, they found another hook somebody else had lost. They then fished all afternoon and got a good string. (Laughter).

NOMINATIONS

President Randall: Thank you, Dr. Morris.

The next order of business is nominations for President.

Dr. C. Jennings (Detroit): I have done a good deal of fishing and I have listened with great interest to the tale told by Dr. Morris, but I give up—I can't tell anything worse than that.

You listened to the brilliant and sympathetic address of our chief executive and you knew from what our President said that our chief executive attained his high office by his service, service to his immediate community, service to his state.

It is my great pleasure tonight to suggest in the form of a nomination a candidate for the office of President of our Society.

Now, in looking over what the qualifications of a President of this Society would be, we must first take service. A man to be elected to this organization as its President, should be a man who has rendered long, efficient, faithful, self-sacrificing service to this Society.

Furthermore, if it be possible, it isn't always so, but if it be possible, we should select a man who is known not only in his own small community, but in his state and, if possible, with a national reputation. He should be eminent and well recognized by the community as one of the best of the men whom they have produced and he should be, if possible, a genial, whole-souled, human being.

Wayne county has become quite a com-

munity. I think those of you from the state who have come here and have seen our enormous buildings and perhaps have stopped to realize for a moment that these buildings, most of them, are filled with members of the medical profession, so that Wayne county certainly has material for candidates for President—we have no dearth of material and we have no dearth of good material—but I wish to present one who stands high in this large galaxy of the medical profession, who has earned his way, who represents the best that there is in the medical profession.

He is a product of Michigan. He was born in the Northern Peninsula fifty years ago. He was educated in the schools of medicine. He has served as interne, as surgeon, as head of departments in our hospitals, in our teaching organizations, and, what is more to us as a Society, he has served the Society well and long and faithfully; as a member of the House of Delegates of the American Medical Association he has been a representative from this Society for upward of fifteen years with an occasional intermission, so that he has served our Society well.

Now it is not necessary for me to go further. Perhaps I could, and I would not embarrass him because at the present time he is not with us, and today the Society received a message from our candidate, a cable from Paris, stating that he was well and that he sent his greetings and best wishes to the Michigan State Medical Society and that he would return about October 5.

Gentlemen of the State Society—Ladies and Gentlemen of the State Society (I forget that I was raised in the Victorian era and can't quite get used to the ladies in our political and other organizations)—Ladies and Gentlemen of the Society, it gives me very great pleasure to present for your consideration as president of this organization that brilliant surgeon, great teacher, great author, delightful gentleman, Dr. Louis J. Hirschman of Wayne county. (Prolonged applause).

Dr. C. D. Brooks (Wayne County): My name is Brooks, not Brook, because Brook is a delegate and has been ever since I have graduated and I have never been a delegate to anything. Until Jennings said he was away, I thought maybe he was talking about me. I was sitting between him and McKean, and I absorbed a lot of medicine which wouldn't hurt a general surgeon. I was a little afraid he was going to mention my name.

In seconding the nomination of Dr. Hirschman, I want to say we planned to bring him up last year, but Herbert Randall was a relative of mine—no fault of his or mine, he being a son of his mother and his mother being the cousin of the wife of my uncle, which happened to be no fault of his or mine, but it happened to be that my aunt, my uncle's wife, guided my mother when I was born, to call me "Herbert" and I thank the Lord they didn't. If they had, I would have been "Herbert," but it looks like a Herbert year.

I feel we have a man in the county who has traveled the world around on account of the piles of his friends and has hay fever of choice more or less and develops a mastoid and has insurance and has an operation and goes to Europe—and he wouldn't like this to be known outside, on the insurance money—when we have a man like that I feel he is certainly some good manager. (Laughter).

Now this is the 108th meeting of the Michigan State Medical Society and for more than twenty years I have attended nearly all the sessions and have felt that the State Society was becoming more a unit of men practicing medicine for the common good and for no selfish purpose whatsoever. We have nothing to be ashamed about and one thing I think has always been the finest thing for Michigan State Medical, and I have always felt when nominations were made for president, it seemed to be that the man was just right, even if it happens to be a Republic year and Herbert was past president—and now it is quite important, I think, that the traditions of this society be upheld and while we have many men for whom I would gladly sponsor nomination, I feel we have no one the society could trust more with the policies of the Medical Society and the co-operation of its components than we can in Dr. Louis J. Hirschman.

He owes his success a good deal to a misfortune of ours. I belong to a hospital, have for two or three years, where we have one hundred and eighty men on the staff and, until lately, we had one hundred and twenty beds and when we sent a patient to the hospital, they would go and sit there from Monday until Wednesday and when I would go on Thursday hoping the patient would be better, I would find Dr. Hirschman was handling the patient after his type of operation which they developed by sitting so long, and after that they walked painfully out.

They have often told me afterwards that

certainly the week-end they went in the hospital under his care, while it was pleasant at the hospital, since then was anything but pleasant. I feel, therefore, that in selecting someone of Dr. Hirschman's calibre, the Michigan State Society is doing itself proud.

Thank you! (Applause).

Dr. A. M. Hume (Owosso): I am not getting up as part of the Wayne county family, but I was not aware that everyone in this community for cousin or mother-in-law, or grandfather, or grandmother, or sister, cousin, or aunt to somebody else, and I think, therefore, that we shall have to get outside the family and in behalf of the central part of the state where I live, the forested section, clear away from the scrubbiest town, I take the greatest pleasure in seconding the nomination of Dr. Hirschman in behalf, I believe, of the physicians of the community in which I reside. (Applause).

President Randall: Are there any other nominations?

Dr. William Donald (Wayne County): Mr. President, Ladies and Gentlemen: I have listened to the nomination and the secondation of my esteemed friend, Dr. Hirschman. I am delighted with the exordiums heaped upon him. I thoroughly and wholly agree with the statement of Dr. Jennings that we have abundance of material in Wayne county which is eminently suited for the great office of president of this great society. Nay, more, I feel that we have abundant material throughout the state, but at this particular time and in this particular year, it does seem to me that we might well select from Wayne county.

Now I have to offer the name of a gentleman who is well known in Wayne County, in medical circles throughout Michigan, in medical circles throughout the nation, as president or late president of the Northern Tri-State Medical Society, and as associate Secretary of the Society of Obstetricians and Gynecologists, the national organization, as past president of the great Wayne County Medical Society of fourteen hundred members, I feel that those honors reflect the character and ability of the man.

For the last half decade I have sat in intimate communication and communion with this man in various and varying capacities. In the Northern Tri-State and in the Wayne County, and in some of the organizations or semi-organizations or sub-organizations of the Michigan State

Medical Society, we have sat together practically every week around the council table.

We have not agreed always by any means. In fact, I might say sometimes we have fought very vigorously and furiously and beautifully, but when we separate, we have the same love for each other that two Irishmen have for each other after a most beautiful "foight."

I have to offer you the name of Dr. George Van Amber Brown as nominee for the position of president of the Michigan State Medical Society. (Applause).

Now I think that this is a crucial year in medicine in Michigan. I want to hurriedly add to that, I am not an alarmist. I am not losing sleep on account of state medicine. I am not terrifically disturbed on account of the infractions of etiquette on the part of the state university.

I am not disturbed by any of the waves of concern that have swept over the medical community in Michigan in the past few years. Yet I do sense that there is an exceedingly strong sentiment against the extreme of state medicine which has its best exposition in the panel system of England and Germany. From all such evils may the good Lord defend us. Yet, you know as well as I do that there is a reasonable place in the community and in the world for a reasonable form of state medicine.

Now I am glad to inform you that my candidate, or the candidate of the group that I represent, is unalterably opposed—I have it from his own lips—to state medicine, and he goes, I personally regret, a little farther than I. He wouldn't have any of it at any time, any place, anyhow. However, that is the type of man that he is.

What are the qualifications of this man that we may know something of him, or that you may know something of him? I refer to those of you who do not know him as I know him through five years of intensive co-operative service. Well, I told you he is a good fighter, a very beautiful fighter. I believe that this year we need a fighter to lead the state association. I believe we need a vigorous fighter. I believe that unless we fight, we are bound for a most serious lot of trouble.

Most of you know the report that the Council of this association brought in yesterday, announcing to us the probability of the approach of our Society to the legislature for a new Medical Practice Act. It may be the psychological time. It may not. I don't know. The matter was referred over back to the Council and to the Legis-

lative Committee for their consideration again. I have an idea that it is the psychological time and the time to fight. I have an idea if you are going to fight, you need a fighter and a man with a two-fisted attack. I have an idea that the military men are right when they say the best defense is an attack, and I want to tell you gentlemen, and ladies also, that if I know anything about the man whose name I have mentioned to you, he is always on the attack.

Through the last year he came to us in the Wayne County Medical Society and through him various changes were made, various reforms were propagated, and I want to say this, that, strange to say, although I have been president of the Society and inaugurated various reforms, I found a lot of them didn't go, but I want to say this to you, that everything that Dr. Brown put over in the Wayne County Medical Society, went.

I have never seen such a drive, such intensive energy and profound capacity for work which, as you know, has been pronounced the real essential of genius. I never have seen that anywhere yet evidenced in my young life.

I want to add this, and then I am through: You know the effort that has been made to inaugurate a post-graduate system, ultimately a post-graduate university in this state. You know what a pronounced influence your Society has upon this inauguration. You know how you have co-operated, or how we have co-operated with our great university, with the Detroit College of Medicine and Surgery to bring this about.

Last spring we pulled off what is probably the best clinic ever pulled off in Detroit or in the west, four days of intensive clinic, and I want to whisper in your ears that the magnificent clinic we pulled off last spring is in part the practical result of the most intensive work and energy on the part of this same George Van Amber Brown.

He is a glutton for work and I am going to quote something like Brer Rabbit, "a beaver for industry, a wolf for intensity of follow, and a lion for courage"—George Van Amber Brown. (Applause).

Dr. C. B. Garner (Detroit): Men and women, we get out of life exactly what we put into it. The man who puts in most, receives most. The man who receives most, gives most to his fellow men. George Van Amber Brown for a number of years has been a close student. He has perfected

himself along scientific lines pertaining to his chosen profession. He has been a great asset to the medical profession, not only in Michigan, but also in many other states of the Union. For the past year he has acted as president of the Wayne County Medical Society. He created and perfected a program which was worth while and I want to say to you men and women, if he is elected as president of the State Society, I am positive that he will give you a program that will not only be instructive, constructive and pleasing to you, but, after he is through, you will look back and think to yourselves, we have received something.

Ladies and gentlemen, it is with great pleasure that I second the nomination made by Dr. William Donald for Dr. George Van Amber Brown. (Applause).

President Randall: Are there any further nominations?

Dr. Guy Kiefer: On behalf of a number of doctors of the Wayne County Medical Society, and a large number of physicians throughout the state in the component medical societies, I take great pleasure in seconding the nomination of Dr. Louis J. Hirschman.

President Randall: Are there further nominations for president? If not, we will declare the nominations for president are closed.

Secretary Warnshuis: Mr. President, under the provisions of the Constitution and By-Laws, when more than one candidate is placed in nomination, a ballot box is to be opened at the registration bureau. It will be placed there tomorrow morning and will be kept open from 8 o'clock until 11:45.

I have just received the following telegram. The Indiana Medical State Society is convening at the same time our Michigan State Medical Society is in convention and in common courtesy your Michigan State Medical Society sent a telegram of felicitation and greeting to the Indiana State Medical Society and this is the response:

"The House of Delegates of the Indiana State Medical Association received with enthusiasm your telegram of greetings and expressions of friendly interest. Your thoughtfulness is much appreciated and we commend the fine spirit which prompted your action. It is our desire that the members of your State Society, through your House of Delegates in the general session, may learn of the high esteem we hold for them. We in Indiana

recognize the high character of work and service being done by the Michigan State Medical Society and we extend our congratulations on past performances and best wishes for the future.

"Thomas Hendricks, Secretary,
"State Medical Society of Indiana."
(Applause).

President Randall: The next order of business is General Business. Is there any business you want to bring up at this meeting? If not, I will ask you to arise while the benediction is given by the Rev. Mr. Meyers.

Rev. Mr. Meyers: Our Father, Who art in heaven, having met here this evening as men and women who have dedicated their lives to the service of their fellow men, we pause for a brief moment in our deliberations that we may pay the respect and tribute due unto thy holy name. Above all things do we ask Thee, Father, as we are about to go apart here this evening, that Thou wouldst bless the things that have been said and the work that has been done, and we appeal to Thee that Thou wouldst imbue us with Thy spirit that we may go forth from here dedicating ourselves more fully and truly to the welfare of those who are dependent upon us, so that we may develop a character which will become beautiful and worth while, a character which others will be willing to emulate, and this we ask, O Father, in the name of the Christ.

And may now the grace of our Lord Jesus Christ and the love of God the Father and the inspiration of the Holy Spirit be and abide with us now and forever more. Amen.

President Randall: The meeting stands adjourned.

The meeting adjourned at 9:45 o'clock.

SECOND GENERAL SESSION

Friday noon session, September 28, 1928.

The Second General Session of the Michigan State Medical Society was called to order in the ball room of the Book-Cadillac hotel at 12 o'clock noon, with President Randall in the chair.

President Randall: Will you please come to order. The first order of business is the report of the Nominating Committee.

Secretary Warnshuis: Mr. President, I have in my hand the report of the Nominating Committee that conducted the ballot for president this morning, the polls being opened at 8 o'clock, and closed at 11:45. There were a total of 397 votes

cast. Louis J. Hirschman received 255; George Van Amber Brown, 142. (Applause).

President Randall: You have elected as your president for the coming year Louis J. Hirschman of Detroit. As he is not here, we can't present him. Is Dr. Jennings here, who will represent President Hirschman?

Dr. Jennings: Mr. President and Members of the Michigan State Medical Society: It would be pretty difficult to substitute for Dr. Hirschman. Dr. Hirschman is a much younger man than I am and much snappier, with many of the qualities I don't possess. Besides, he is a surgeon and a surgeon is always popular, and I am not one of the popular class, so it is a little difficult, but, as a sponsor for Dr. Hirschman last evening, I do want to express my hearty thanks and my gratification that Dr. Hirschman, of Wayne County, has been honored and Dr. Hirsch-

man has been selected to be the one to represent Wayne county.

I think I have in my pocket—I perhaps have mislaid it—but Dr. Hirschman sent his congratulations to the Society and his best wishes and stated in the cablegram that he was well and I am sure we all congratulate him upon that fact. Dr. Hirschman was not well. He had, unfortunately, undergone a grave surgical operation, but he has recovered and I want to thank you and express for Dr. Hirschman and for Wayne county the sentiments of Dr. Hirschman and Wayne county.

I thank very sincerely the Michigan State Medical Society for elevating our candidate to the presidency. (Applause).

President Randall: Is there any general business that anyone wishes to bring up at this time? If not, I declare this session closed.

The meeting adjourned at 12:10 o'clock.
F. C. Warnshuis, *Secretary.*

REGISTRATION—ANNUAL MEETING

<i>Allegan County</i> Medill, Wilbur C.	Nelson, A. W. Olsen, A. B. Riley, W. H. Sharp, Ara D. Stone, R. C. Verity, Lloyd E.	Rowley, James A. Scott, Robert D. Stevensen, W. W. Wall, Wm. J. Wheelock, A. S. White, H. T. Winchester, W. H. Wright, Albert G.	<i>Ionian-Montcalm</i> Alton, Robert A. Johns, Joseph Kelsey, Lee E. Maynard, H. M. Pankhurst, C. T. Peabody, C. H. Penton, A. B. Stanton, G. A. Toan, J. W.
<i>Alpena County</i> Bell, S. T. Cameron, D. A. Newton, W. B. Williams, C. M.	<i>Cass County</i> Mac Nab, Alex B. McCutcheon, W. C.	<i>Grand Traverse-Lee- lanan County</i> Sladek, E. F.	<i>Jackson County</i> Bullen, G. Rex Clarke, Corwin S. Cooley, R. M. Corley, C. Edmunds, J. M. Hackett, Thos. Hecks, G. C. Hurley, H. L. Kudner, Don F. Lewis, E. F. McGarvey, William Edward McLaughlin, M. J. Munro, C. D. O'Meara, J. J. Porter, Horace Wray Riley, Philip Roberts, A. J. Seybold, George A. Smith, John C. Shaeffer, A. M. Thayer, Earl A. VanSchoick, Frank
<i>Antrim-Charlevoix- Emmet-Cheboygan</i> Chapman, Willis Earle Duffie, Don H. Van Leuven, B. H.	<i>Clinton County</i> Abbott, Vernon C. Scott, W. A.	<i>Gratiot-Isabella-Clare</i> Baskerville, C. M. Budge, M. J. DuBois, Chas. F. Graham, F. J. Lamb, E. T. McNamara, John Smith, R. B.	<i>Kalamazoo County</i> Andrews, F. T. Caldwell, Geo. H. Collins, Ward E. Fast, Ralph B. MacGregor, John R. Osborne, Charles E. Osterander, Herman Penoyar, F. C. Rogers, L. V. Shepard, B. A. Thompson, R. D. West, Arthur E. Westcott, Leo E. Wilbur, Edward Yoder, O. R.
<i>Barry County</i> Brown, C. K. Lathrop, C. P. Woodburne, A. W.	<i>Eaton County</i> Byington, G. M. Quick, Phil. H. Stimson, C. A.	<i>Hillsdale County</i> Bower, Charles T. Fenton, D. W. Green, Burt F. Hanke, Geo. R. McFarland, O. G. Sawyer, Walter H.	<i>Kent County</i> Anderson, E. B. Baker, Abel Bettison, William L.
<i>Bay County</i> Allen, A. D. Baker, Charles H. Brown, G. M. Fisher, R. L. Foster, L. F. Grosjean, Joseph C. Hess, C. L. Kessler, Mana McEwan, J. H. Sherman, R. N. Smith, D. T. Urmston, Paul R. Wilson, T. G.	<i>Genneseee County</i> Bird, W. G. Blakeley, A. C. Bogart, Leon M. Briggs, Guy D. Burnell, Max Burr, C. B. Chambers, M. S. Charters, John H. Clarke, C. P. Connell, J. T. Cook, Henry. Curry, George James Curtin, J. H. Evers, J. W. Goering, George R. Jickling, D. S. Knapp, Don D. Knapp, Harry W. Knapp, H. D. McArthur, Arthur Macduff, R. Bruce Mackood, Jos. A. Malfroid, B. W. Manwaring, J. G. R. Marshall, W. H. Merritt, C. V. Minn, Frederick B. Moller, Carl F. Morrish, Ray S. Orr, J. W. Paull, A. T. Pierce, Eugene B. Randall, H. E. Reeder, F. E. Reynolds, A. J.	<i>Houghton County</i> Harkness, Robert B.	
<i>Berrien County</i> Ellet, W. C. Merritt, C. W. Witt, E. J.		<i>Huron County</i> Horrell, A. J. Thumme, H. F.	
<i>Branch County</i> Marsden, Thomas Blaine Schultz, Samuel		<i>Ingham County</i> Bauer, Theodore I. Behen, William C. Bruegel, O. H. Carr, Earl Ingram Doyle, C. P. Ellis, C. W. Freeland, O. H. Galbraith, D. A. McIntyre, J. Earl Osborn, Samuel Owen, Arthur E. Prall, Harry J. Randall, O. M. Shaw, Milton Stucky, George C. Towne, L. C. Weinburgh, Harry B. Wight, W. G.	
<i>Calhoun County</i> Allen, H. R. Barnhart, S. E. Cooper, J. E. Gorsline, C. S. Hafford, A. T. Hafford, G. C. Haughey, Wilfrid Hilborn, Caroline Holton, Benjamin George Knapp, Harry B.			

Boet, Frank A.
 Brook, J. D.
 Campbell, Alexander M.
 Collisi, Harrison S.
 Corbus, Burton R.
 Currier, Fred P.
 DuBois, W. J.
 Failing, John Fletcher
 Gordon, Thomas D.
 Hodgen, John T.
 Holcomb, John Newell
 Huizenga, J. G.
 Irwin, T. C.
 Johnston, Collins H.
 Lieffers, Harry
 Moore, V. M.
 Morrill, D. M.
 Nesbitt, E. N.
 Pye, H. J.
 Rozema, S. L.
 Schermerhorn, L. T.
 Sevey, Leon E.
 Smith, R. E.
 Smith, R. R.
 Snapp, Carl F.
 Southwick, G. H.
 Spencer, Ralph H.
 Torgerson, W. R.
 Towsley, G. G.
 Vann, N. S.
 Vis, Wm. R.
 Votey, Frank A.
 Warnshuis, F. C.
 Webb, R. F.
 Wells, Merrill
 Wenger, A. V.
 Wenger, John N.
 Whinery, Joseph B.

Lapeer County

Best, H. M.
 Blakes'ee, Merton O.
 Crankshaw, D. W.
 Kay, W. J.
 Merz, Henry G.
 Scott, J. W.
 Zemmer, H. B.

Lenawee County

Claxton, Wilbert T.
 Howland, F. A.
 Marsh, R. G. B.
 Spalding, I. L.

Livingston County

Davis, L. A.
 Huntley, W. B.

Luce County

Gibson, R. E. L.
 Perry, H. E.

Macomb County

Bower, Allen B.
 Croman, Joseph M., Jr.
 Curlett, J. E.
 Letts, J. P.
 Miller, E. J.
 Montgomery, Jas. E.
 Moore, Geo. F.
 Thompson, Alfred A.
 Wolfson, Victor Hugo

Manistee County

McKay, A. A.

Marquette County

Burge, R. A.
 Hornbogen, A. W.

Mecosta County

Dodge, W. T.
 Mac Intyre, Donald
 Treynor, Thos. P.

Menominee County

Elwood, Calvin R.
 Kaye, John T.
 Lan'sborough, D. R.
 Sawbridge, E.
 Towey, J. W.

Monroe County

Ames, Florence
 McMil'in, J. H.
 Newbern, L. F.
 Rub'ey, Samuel J.

Muskegon County

Harrington, A. F.
 LeFevre, George L.
 Morford, F. N.

O. M. C. O. R. O.

Keyport, C. R.

Oakland County

Baker, Frederick A.
 Baker, Robert H.
 Bauer, Ernest W.
 Borland, A.
 Campbell, Harvey
 Colvin, Nathan B.
 Corbit, Aileen B.
 Cromwell, C. D.
 Farnham, Lucius A.
 Gerls, Frank B.
 Hasner, R. B.
 Hume, T. W. K.
 Larson, B. T.
 Lockwood, Clement E.
 Neafie, C. A.
 Newitt, Arthur W.
 Roehm, Harold R.
 Sibley, H. A.
 Stewart, Peter
 Sutherland, C. J.
 Sutton, Palmer E.
 Uloth, M. J.

Ontonagon County

Evans, E. J.

Ottawa County

Stickley, A. E.

Sanilac County

Campbell, J. E.
 Leamont, H. H.

Schoolcraft County

Mac Leod, Edith A.
 Thomson, W. E.

Saginaw County

Cady, F. J.
 Curtis, C. C.
 English, W. F.
 Ernst, A. R.
 Hutchison, John W.
 Keller, Samuel S.
 Kempton, Rockwell M.
 Leitch, A. E.
 Lohr, Oliver Willison
 Longstreet, Martha
 McKinney, Alexander R.
 Moon, A. Raymond
 O'Reilly, W. J.
 Ostrander, Frank W.
 Powers, J. H.
 Sample, John T.
 Sheldon, S. A.
 Watson, Roy S.

St. Clair County

Burley, Jacob H.
 Callery, A. L.
 De Gurse, Thomas E.
 Fraser, Robert C.
 Heavenrich, Theodore F.
 MacKenzie, Alex J.
 Thomas, C. F.
 Treadgold, Douglas
 Vroman, M. E.
 Windham, R. A.
 Wight, W. Y.

Shiawassee County

Greene, I. W.
 Hixson, L. D.
 Hume, Arthur M.
 Sackrider, Geo. P.
 Ward, W. E.

St. Joseph County

Morris, Chas. G.
 Springer, R. A.

Tri-County

Ricker, Otto L.
 Smith, W. J.

Tuscola County

Crooks, W. A.
 Manner, J. G.
 Merriman, Henry H.
 Von Renner, Otto

Washtenaw County

Alexander, John
 Barss, H. D.
 Bruce, James D.
 Camp, Carl D.
 Collier, Frederick A.
 Curtis, Arthur C.
 Darling, Cyrenus G.
 Darling, Cyrenus G., Jr.
 Davis, James E.
 George, Conrad, Jr.
 Huston, John
 Kampmeier, R. H.
 Klingman, Theophil
 Muehlig, Geo. F.
 Palmer, A. A.
 Parsons, John Purl
 Pearson, A. H.
 Peet, Max Minor
 Peterson, Reuben
 Riggs, H. A.
 Scheurer, P. A.
 Shambaugh, Noel F.
 Sturgis, Cyrus C.
 Sundwall, John
 Wessinger, John A.

Wayne County

Adler, Leopold
 Agins, Jacob
 Albrecht, Herman F.
 Allen, Norman M.
 Altschuler, Ira M.
 Amberg, Emil
 Anderson, Walter T.
 Ashley, Byron L.
 Ashton, Frederick B.
 Athay, Roland M.
 Andries, Raymond C.
 Bacon, Vinton A.
 Bagley, H. E.
 Baker, Clarence
 Baker, George J.
 Ballard, Charles S.
 Ballin, Max
 Barrett, Wyman D.
 Barnett, S. E.
 Barone, Charles J.
 Baumgarten, Elden C.
 Beach, Watson
 Beardslee, E. V.
 Begle, Howland L.
 Bell, Wm. M.
 Bennett, Zina B.
 Bergegrun, Katherine
 Bernbaum, Bernard
 Bernstein, Edward J.
 Biddle, Andrew Porter
 Birkelo, C. C.
 Blain, Alexander W.
 Boell, Arthur F.
 Bolasny, Jack R.
 Brachman, D. S.
 Braley, W. N.
 Braun, Lionel
 Brines, Osborne A.
 Brooks, Clark D.
 Brown, A. O.
 Brown, Henry S.
 Brown, Stanley H.
 Browne, G. Van Amber
 Brunk, A. S.
 Brunk, C. F.
 Bryant, B. L.
 Buesser, Frederick G.
 Butler, Harry J.
 Caldwell, J. Ewart
 Calvin, Leslie T.
 Campbell, Mary B.
 Candler, Clarence L.
 Carey, Cornelius
 Carmichael, E. K.
 Carstens, Henry R.
 Carter, John M.
 Carter, Leland F.
 Cassidy, William J.
 Catherwood, A. E.
 Chadwick, Florence
 Chance, Jos. H.
 Chapman, A. L.
 Charters, J. Hamilton
 Chase, Sara T.
 Chester, J. H.
 Chipman, Willard A.
 Chrouch, Laurence A.
 Clark, Harold E.
 Clark, R. L.
 Cleland, James, Jr.
 Clifford, Percy
 Clinton, William R.
 Cohoe, Don A.

Coleman, Margaret W.
 Condix, L. Irving
 Connelly, Basil L.
 Connor, Guy L.
 Connor, Ray
 Cook, Henry H.
 Coolidge, Maria B.
 Coxon, A. William
 Crane, Langdon T.
 Cowan, A. L.
 Crawford, Albert Sturges
 Cree, Walter J.
 Crooshore, James E.
 Cruikshank, Alex
 Cumming, Robert E.
 Cunningham, J. W.
 Currie, Ernest M.
 Curtis, Frank E.
 Davidson, Edward C.
 Davis, C. R.
 DeFoe, Walter A.
 Dempster, Jas. H.
 De Spelder, R. E.
 Dibble, Harry Franklin
 Dibble, John B.
 Dillard, M. P.
 Dix, Ira L.
 Donald, W. M.
 Doty, Chester A.
 Douglas, Bruce H.
 Douglas, Donald
 Downer, Ira G.
 Dretzka, Leo
 Dubnove, A.
 Dutches, Chas. E.
 Dutton, Chas. A.
 Elliott, W. G.
 Elvidge, Robert J.
 Espie, E. R.
 Ewing, C. H.
 Fauman, David H.
 Fay, George E.
 Fenton, Russell F.
 Fischer, Oscar E.
 Flora, Wayne W.
 Flower, James A.
 Ford, Walter D.
 Foster, Daniel P.
 Foster, Robert F.
 Fowler, Wm.
 Fraser, Herman L.
 Freund, Albert L.
 Freund, Hugo A.
 Friedlaender, Bernard
 Frothingham, George E.
 Froude, Philip
 Gaberman, David B.
 Galdonyi, L.
 Garner, H. B.
 Gates, Nathaniel
 Geib, L. D.
 Geib, O. D.
 Gellert, I. S.
 Gitlin, Charles
 Gleason, John E.
 Glowacki, B. F.
 Goldstone, R. R.
 Gonne, William S.
 Gordon, J. E.
 Gordon, William H.
 Gostanian, J.
 Grant, H.
 Grant, L. E.
 Green, H. Wellington
 Green, Walter E.
 Grob, Otto
 Gudakunst, Don W.
 Hackett, A. R.
 Hackett, William A.
 Hagen, Marcus
 Hale, Arthur S.
 Hall, A. C.
 Hamilton, Stewart
 Hammond, Jas. L.
 Hanser, J.
 Harm, W. B.
 Harrell, Voss
 Harris, A. E.
 Harrison, Hugh
 Harrison, H. W.
 Harrison, J. W.
 Hart, T. M.
 Hawkins, James Ward
 Haynes, Lon W.
 Henderson, Harold
 Henderson, Leslie T.
 Henry, L. L.
 Hewitt, H. W.
 Hipp, William
 Hislop, Robert
 Hoffman, Martin H.

Hoodge, James B.
 Holaday, C. H.
 Hollinger, Chauncey Orme
 Holmes, Alfred W.
 Holmes, Arthur D.
 Honhart, F. L.
 Houghton, E. M.
 Howell, Don M.
 Hromadko, Louis
 Hudson, William A.
 Huegli, A. G.
 Hulse, Warren L.
 Hunt, Verne G.
 Insley, Stanley W.
 Jawby, Myron D.
 Jaekel, C. N.
 James, L. Mae
 Jameson, R. C.
 Jarre, H. A.
 Jenne, B. H.
 Jennings, Alpheus F.
 Jennings, C. G.
 Johnson, Ralph K.
 Johnston, E. V.
 Joinville, E.
 Jones, R. D.
 Kahn, Samuel
 Kaminski, Z. L.
 Kamperman, Geo.
 Karr, Herbert S.
 Kay, M. Boyd
 Keating, Thomas F.
 Kelney, H. I.
 Kelly, Frank A.
 Kennedy, Chas. S.
 Kennedy, Robert B.
 Kenning, J. C.
 Kersten, Armand G.
 Kibzey, A. T.
 Kidner, F. C.
 Kiefer, Guy L.
 Kimzey, J. Albert
 King, Walter E.
 Kirschbaum, Harry
 Kliger, David
 Knaggs, Charles W.
 Koebel, R. H.
 Kohn, M. E.
 Kopel, Joseph O.
 Korby, Geo. J.
 Kuhn, Chas. F.
 Kwiecinski, Edward W.
 Laferte, A. D.
 LaMarche, Norman O.
 Lamley, Geo. H.
 Landers, M. B.
 Lange, Anthony H.
 Larsson, B. Hjalmar
 Lauppe, Edward H.
 Leibinger, H. R.
 Leithauser, Daniel J.
 Lemmon, Charles E.
 Lepley, Fred O.
 Levin, Samuel J.
 Levitt, Jacob
 Levy, David J.
 Lewis, J. Hugh
 Lieberman, Barnard L.
 Lilly, Charles J.
 Lim, W. K.
 Lincoln, A. R.
 Lipkin, Ezra
 Lipsky, J. S.
 Livingston, Geo. M.
 Lockwood, B. C.
 Loney, Byron
 Loucks, R. E.
 Luce, H. A.
 Lutz, Earl F.
 MacGregor, W. W.
 MacNaughton, Wallace F.
 McAlister, Gordon
 McAlpine, A. D.
 McAlpine, Gordon S.
 McClelland, Carl C.
 McClintic, C. F.
 McClure, Roy D.
 McClurg, D.
 McCall, C. W.
 McGarvah, J. A.
 McGraw, Arthur B.
 McIntosh, W. V.
 McKean, George E.
 McKean, Richard M.
 McLane, Harriet C.
 McLean, Angus
 McLean, D. W.
 McPherson, R. J.
 McRae, Donald H.
 Maguire, F. J. W.
 Malejan, Harry M.

Mallory, Norman A.
 Mancuso, Vincent S.
 Marinus, Carleton J.
 Martin, E. G.
 Martin, R. M.
 Martmer, Edgar E.
 Matthews, J. D.
 Mayer, E. V.
 Mayer, Willard D.
 May, Earl W.
 Mayne, Cecil H.
 Meader, Fred M.
 Mercer, R. E.
 Merrill, Lionel N.
 Merrill, W. O.
 Merriman, K. S.
 Merritt, Earl G.
 Merritt, Edwin D.
 Mihean, M. K.
 Miller, Hazen L.
 Miller, Maurice P.
 Mills, E. P.
 Minor, Edward G.
 Moehlig, Robert C.
 Moisesides, V. P.
 Mollica, Stephen G.
 Monkman, Byron
 Morgan, Richard H.
 Morin, John B.
 Morton, John B.
 Munson, Frederick T.
 Myers, A. W.
 Naylor, Arch. E.
 Neff, Irwin H.
 Neumann, A. J.
 Northrup, Hubert E.
 O'Brien, E. J.
 Olney, Harold E.
 Oman, Cyrus Franklin
 Osius, Eugene A.
 Owen, Clarence I.
 Palmer, H. G.
 Palmerlee, George H.
 Pangburn, L. E.
 Parker, Walter R.
 Parmeter, Rolland
 Pasternacki, B. W.
 Paull, Chester A.
 Pearse, Harry W.
 Peck, Franklin B.
 Peirce, Howard W.
 Perkin, Frank S.
 Perlis, H. L.
 Pfeiffer, Rudolph L.
 Phillips, Fred W.
 Plaggemeyer, Harry Ward
 Pierce, Frank L.
 Pierson, Merle
 Piper, Clark C.
 Pool, Harry H.
 Poos, Edgar E.
 Potter, Willis A.
 Priborsky, B. H.
 Price, A. Hazen
 Reed, E. Hobart
 Reid, L. Corsan
 Reveno, William S.
 Rixford, W. K.
 Richardson, Allan L.
 Richey, Edward B.
 Robb, J. M.
 Robbins, Edward R.
 Robinson, F. L.
 Root, Charles T.
 Rosen, Robert
 Roth, Theodore I.
 Rothman, Emil D.
 Royce, F. D.
 Runo, Herman H.
 Rupp, Jacob Roth
 Sage, Edw. O.
 Saltzstein, Harry C.
 Sanderson, S. E.
 Sanderson, Susanne
 Seeley, Ward F.
 Sewell, George
 Shaffer, Loren W.
 Shawan, H. K.
 Sherman, B. B.
 Shilkovsky, Hirsh
 Shinsky, Robert F.
 Shoenfield, Adolph
 Siddall, Roger S.
 Silver, M. E.
 Simpson, Clarence E.
 Simpson, H. Lee
 Sipe, Geo. K.
 Sitko, Stanley E.
 Slater, Frank J.
 Slate, Raymond N.
 Slevin, John H.

Smith, Clarence V.
 Smith, Claude A.
 Smith, F. Janney
 Smith, James A.
 Smith, V. LaRue
 Southwick, S. W.
 Spalding, Edward D.
 St. Louis, R. J.
 Steele, Harry L.
 Steinbach, H. B.
 Stern, Louis D.
 Stevens, Rollin Howard
 Stiefel, D. M.
 Stone, Dayton D.
 Straith, Claire L.
 Sullivan, Hugh A.
 Sutherland, J. M.
 Taylor, R. S.
 Thomas, Delma F.
 Thomson, Alexander
 Townsend, K. E.
 Trask, H. D.
 Trombley, Joseph Jerome, Jr.
 Tyson, William E. E.
 Ulbrich, Henry L.
 Vandervelpen, Arthur
 Vardon, Collin C.
 Vardon, Edward M.
 Varney, Henry R.
 Vaughan, J. W.

Vernier, Jean A.
 Walker, Roger V.
 Wallace, W. B.
 Wadsworth, Warren
 Waldbott, George L.
 Warren
 Watson, Edward C.
 Watson, Robert W.
 Wax, John H.
 Weaver, Clarence E.
 Weller, C. N.
 Wendel, Jacob S.
 Wendt, Leonard F. C.
 Wershow, Max
 Whittaker, Alfred H.
 Wickham, A. B.
 Wight, F. B.
 Wilson, Charles A.
 Wilson, Gerald A.
 Wilson, Stuart
 Wilson, Walter J.
 Wittenberg, S. S.
 Witter, F. C.
 Witwer, E. R.
 Wollenberg, R. A. C.
 Wood, G. H.
 Woodworth, William P.
 Yates, H. Wellington
 Young, G. R.
 Zolliker, Carl R.

GUESTS—ANNUAL MEETING

Anderson, J. A.
 Bedell, Arthur J.
 Dolley, Frank Stephen
 Gessner, Frederick C.
 Greene, J. A.
 Hedblom, Carl A.
 John, Henry J.
 Northcutt, J. D.
 Poole, Marsh Wm.
 Shute, R. J.
 Starr, F. N. G.
 Stemen, William E.
 Stevens, Nellie
 Tew, W. P.

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 Albany
 Los Angeles
 Milwaukee
 Dallas
 Chicago
 Cleveland
 Covington
 Windsor
 Windsor
 Toronto
 Denver
 Los Angeles
 Dindsor

WOMEN'S AUXILIARY

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Mrs. Foster, L. Fernald
 Mrs. Grosjean, J. C.
 Mrs. Urmston, P. R.

Berrien County

Mrs. Ellet, William C.

Calhoun County

Mrs. Allen, H. R.

Genesee County

Mrs. Bird, W. G.

Hillsdale County

Mrs. Sawyer, W. H.
 Mrs. Schermerhorn, G. D.

Ingham County

Mrs. Brucker, K. B.
 Mrs. Doyle, Clare A.
 Mrs. Griswold, Don M.
 Mrs. McIntyre, J. E.
 Mrs. McNamara, W. E.
 Mrs. Osborne, Gladys
 Mrs. Rockwell, H. C.
 Mrs. Wight, W. G.

Jackson County

Mrs. Bullen, G. R.
 Mrs. Cooley, R. M.
 Mrs. Corley, C.
 Mrs. Hachett, T. E.
 Mrs. Harris, L. J.
 Mrs. Hicks, G. C.
 Mrs. Kudner, D. F.
 Mrs. Lewis, Elmore F.
 Mrs. McLaughlin, M. J.
 Mrs. Peterson, E. S.
 Mrs. Roberts, A. J.

Kent County

Mrs. Failing, Marion (J. F.)
 Mrs. Holcomb, J. N.
 Mrs. Smith, R. E.

Marquette County

Mrs. Burke, R. A.

Mecosta County

Mrs. Dore, W. T.

Ottawa County

Mrs. Stickley, A. E.

Saginaw County

Mrs. Alderton, G. A.

Mrs. Beckwith, B. H.
 Mrs. Cady, F. J.
 Mrs. Ernst, G. R.
 Mrs. Hutchison, John W.
 Mrs. Keller, S. S.
 Mrs. Ostrander, F. W.
 Mrs. Sheldon, Bernice

Washtenaw County

Mrs. Palmer, A. A.
 Mrs. Sundwall, John

Wayne County

Mrs. Bacon, Vinton A.
 Mrs. Bittker, I. Irving
 Mrs. Bleier, Joseph
 Mrs. Candler, Clarence L.
 Mrs. Carter, John M.
 Mrs. Charters, J. Hamilton
 Mrs. Connelly, Basil L.
 Mrs. Corbett, John
 Mrs. Cowen, Leon B.
 Mrs. Duob, Howard
 Mrs. Garipey, Louis J.
 Mrs. French, Albert L.
 Mrs. Gitlin, Chas.
 Mrs. Hanchett, J. C.
 Mrs. Hulse, W. L.
 Mrs. Jacob, John C.
 Mrs. Kennedy, Charles S.
 Mrs. Kiefer, Guy L.
 Mrs. Kipp, Arthur
 Mrs. Lassaline, S. J.
 Mrs. Leibinger, H. R.
 Mrs. Lipkin, Ezra
 Mrs. Mac Arthur, Nelson
 Mrs. Martin, Edward G.
 Mrs. Merriman, K. S.
 Mrs. Novy, Robert L.
 Mrs. Owen, Clarence I.
 Mrs. Pittman, John E.
 Mrs. Potter, A.
 Mrs. Rupp, J. R.
 Mrs. Steinbach, H. B.
 Mrs. Straith, Claire
 Mrs. Tomsu, Charles M.
 Miss Van Zile, Mary
 Mrs. Wax, J.
 Mrs. Weaver, Clarence E.
 Mrs. Wendel, Jacob S.
 Mrs. Wilson, Gerald A.
 Mrs. Witter, Frank C.

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EDITOR: Frederick C. Warnshuis, M. D.

Secretary Michigan State Medical Society

OUR PRESIDENT'S SALUTATION

Fellow-Members of the Michigan State Medical Society:

While in mid-Atlantic on the 29th of September, I received a radiogram congratulating me on my election to the presidency of this society. I cannot express to you how surprised, thrilled and touched I was by this evidence of your confidence in my ability to assist in directing the affairs of this State Society during the coming year.

On account of my slow convalescence from a serious surgical operation, I was advised to take a sea voyage and recuperate in a different clime. I am happy to state that this prescription worked like a charm and I will be able to devote all of the energy needed in working out some of the problems confronting our profession during my incumbancy.

With the exception of my enforced absence on overseas duty during the World War, the recent Detroit meeting was the first one I have missed in over a quarter of a century. My election to the high office of president during this recent absence was more deeply appreciated by me, if possible, under these above circumstances.

Having so recently returned, I have not as yet formulated any comprehensive plan of service during the coming year. I am studying the problems which confront us and realize that this is a crucial year, not only for the medical profession, but for the health of the public. I would be undeserving of the trust and confidence your action has shown that you have placed in me, if I did not consecrate myself to your service, during my term of office.

Those who oppose the progressive efforts of the medical profession, in its battle with disease, are enemies to public health. Those who place obstacles in the way of that sacred relationship of the individual physician to his patient are guilty of retarding the progress of human happiness and health. Any encroachment on that relationship by any organization, whether federal, state, county, municipal, industrial or social should be viewed with

suspicion and opposed by all legitimate means at our command.

A careful study of the present day needs and requirements of the public in regard to sanitation, preventative and curative medicine, must be made to determine the limitations of the activities of organized health authorities, pay and free clinics, insurance groups, industrial and welfare organizations in order that the rights of the individual be not jeopardized.

Impending legislation will be watched closely and your president promises his fullest co-operation with the representatives of the Michigan State Medical Society and its legislative committees and begs of all of his fellow-members to co-operate in the fullest extent in bringing pressure to bear upon their local representatives in the state legislature whenever it is necessary to enlist their support in those measures which will best operate for the best interests of the welfare and health of the citizens of this great state in which we are privileged to practice our profession.

Louis J. Hirschman, M. D.

GOVERNOR GREEN'S ADDRESS

The following are "high-light" extracts from the Governor's address:

"We don't pay much attention to the heroes of medicine who have done wonderful things."

* * *

"... Your profession needs among other problems to take definite steps to keep the public well informed of the progress of medicine and instruct the people how to discover the men most competent to practice the healing art."

* * *

"... Have you given serious thought to the importance of not allowing poorly prepared men and charlatans to adopt the title 'Doctor' and open offices to practice the healing art?"

* * *

"Every time a citizen strays into the hands of a quack or an incompetent practitioner, he comes away with a lowered opinion of the title of 'Doctor.'"

“Why is it not possible for you men to inaugurate regulations making it impossible for a man or woman to come up for state examinations unless he is adequately prepared with a minimum of education? And that minimum, in my opinion, should not be too low.”

* * *

“It would be a great day for Michigan if some time a layman could open the door of any physician’s office and know in this state the standards of admittance are highest and the title of ‘Doctor’ cannot be usurped by any ambitious fellow half-trained in medicine and improperly grounded in the essentials of medical education.”

* * *

“The Bar Association has made great strides . . . I say to you as I did to them—you will have my unqualified help and any necessary legislation to raise the standards of those allowed to practice the healing art.”

* * *

“If you fail us, where shall we turn?”

MINUTES OF THE MEETING OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION HELD AT ANN ARBOR, OCTOBER 8, 1928

1. Present: Doctors Little, MacCraken, Olin, Sundwall, Lyons, Stapleton, Haynes, Huber, Cabot, Dempster, Jackson, Biddle, Bruce, Henderson, Hirschman (President State Medical Society), Warnshuis, Mr. C. A. Fisher, Miss Emilie Sargent (Michigan State Nurses’ Association), Miss Bussel (American Red Cross), Miss L. B. Curtis (Department of Public Instruction), and Miss Marjorie Delavan (State Department of Health).
2. Reading of the minutes of the last meeting.
3. Secretary’s report of the Health Education Program for the year 1927-28. A summary of the report follows:
During the past year, 1927-28, there were given in connection with the high school health program, 491 health lectures as against 465 given during the preceding year. The number of health lectures assigned to Parent-Teacher Associations and other organizations of a similar nature showed a slight decrease. This decrease in the number of assignments to organizations other than high schools is partly accounted for by the fact that in some counties, as in Berrien County for example, as high as fifty health lectures were given in the schools throughout the county. This

large assignment of health lectures to the high schools made it inadvisable to attempt to assign additional health lectures for Parent - Teacher Association programs. Also, in some counties practically all the speakers available were used for the high school assembly programs, making it difficult for us to secure good speakers for outside organizations.

The following is a list of the high school assembly programs, together with the number of lectures given in each case:

	Schools	Lectures
Detroit	14	100
Grand Rapids	10	48
Jackson	4	20
Battle Creek	4	16
Kalamazoo	5	25
Lansing	3	20
Pontiac	4	20
Port Huron	5	25
Flint	3	12
Saginaw	5	21
Bay City.....	3	15
Berrien County.....	10	50
St. Joseph County.....	5	22
Cass County.....	1	2
Branch County.....	5	25
Hillsdale County.....	5	25
Lenawee County.....	6	30
Monroe County.....	3	15
Totals	95	491

The program as carried out in general included five lectures for each school. In some of the larger high schools in Detroit and other cities ten lectures were given in each school. The following is a list of the cities and towns in which these lectures were given:

Detroit	St. Joseph County:
Grand Rapids	Sturgis
Jackson	White Pigeon
Battle Creek	Constantine
Marshall	Centreville
Kalamazoo	Three Rivers
Lansing	Cass County:
Pontiac	Edwardsburg
Keego Harbor	Branch County:
Port Huron	Quincy
Flint	Coldwater
Saginaw	Bronson
Bay City	Sherwood
Monroe County:	Union City
Dundee	Hillsdale County:
Petersburg	Litchfield
Ida	Allen
Berrien County:	Reading
Benton Harbor	Hillsdale
St. Joseph	Jonesville
Bridgman	Lenawee County:
New Troy	Blissfield
Three Oaks	Morenci
Galien	Adrian
Niles	Deerfield
Buchanan	Hudson
Berrien Springs	Clinton
Watervliet	

Number of doctors and dentists taking part in this program.....	112
Number of lectures assigned to P.-T. A. organizations	54
Number of lectures assigned to high school assemblies	491
Total number of lectures given.....	545
Average attendance at P.-T. A. meetings	137
Average attendance at high school assemblies	295
Total estimated attendance upon health lectures	153,600
Total number of different high school students who heard on an average of five health lectures during the year	28,000

The most significant part of this report is the last item given above with reference to the total number of different high school students who have profited, let us hope, by our health lecture program. If education has any meaning at all with reference to the shaping of the action and habits of men and women, the fact that 28,000 different high school students were given specific instruction in various phases of health education should mean much to these young people, so far as rational health habits are concerned.

4. Report of the Newspaper Publicity Committee, by Dr. Bruce. Arrangements have been made with the following daily papers of the state for the publication of a health column under the direction of the Publicity Committee of the Joint Committee on Public Health Education: The Detroit News, Grand Rapids Press, Jackson Patriot, Kalamazoo Gazette, Muskegon Chronicle, Saginaw News Courier, Ann Arbor News, Bay City Tribune and Flint Journal. Through the medium of these nine newspapers, articles bearing upon various phases of public health reach 2,-800,000 people daily.

Dr. Bruce reported that the total receipts from the various units of the Joint Committee toward the Publicity Fund amounted to \$2,500. Balance on hand, October 8, \$2,070. Arrangements were made with the various newspapers concerned, by which these papers agreed to pay into the Joint Committee Publicity Fund amounts equal to those appropriated for health columns through various agencies.

Dr. Bruce submitted a letterhead form for the approval of the Committee. It was moved and carried that the letterhead submitted be approved.

5. Report of Mr. Henderson and Mr. Fisher as to the health program for the

coming year. Mr. Henderson called attention to the significant fact that of the ninety-five high schools in which the program had been going forward for the past year, ninety-four signified their desire of continuing the program for the coming year. He pointed out also the desirability of extending the high school program to other counties than those already reached. He laid special emphasis upon the desirability of co-ordinating the health education program as conducted by the Joint Committee with the various Parent-Teacher Association and Community programs which are now going forward in the state.

During the past two years Mr. Fisher has been making a special study of the community activities throughout the state of Michigan, especially as applying to the smaller centers. With a view of bringing about co-operation of the work of the Joint Committee with these community programs, Mr. Henderson asked Mr. Fisher, assistant director of the Extension Division, and Dr. Isaminger, who was appointed to take the place of Dr. Sinai, to co-operate in every way possible in connection with the health education activities.

Mr. Fisher was called upon to outline a program designed to arouse interest in health education on the part of high school students. To this end, he proposed that some sort of a contest be staged, by which a prize or prizes might be offered to those students who made the best written report of the health education lectures given in their various schools. He also proposed that a co-operative plan be entered into with the art departments of the various high schools, whereby a prize might be offered for the best drawing or cartoon bearing upon health subjects. He called attention to the fact that he had taken the matter up tentatively with the Detroit News. Dr. Warnshuis suggested at this point that it might be wise for the Joint Committee to set aside a fund for the purchase of suitable prizes to be offered throughout the state. Dr. Little further called attention to the desirability of asking each newspaper to sponsor the proposed contest activities in its own municipality with a view tot securing the co-operation of all the newspapers which are now interested in public health activities.

After further discussion, it was moved by Dr. Warnshuis and carried that a committee be appointed with power to act to take up the matter of immediate action in connection with the proposed health contest activities and that an appropriation

of \$100 be authorized by the Joint Committee to carry on this work. The chairman appointed the following committee: C. A. Fisher, chairman, Doctors Hirschman, Bruce, Jackson and Henderson. The committee was instructed to report progress at the next meeting.

6. It was moved by Dr. Warnshuis and carried that the Secretary be instructed to communicate with the various normal schools and colleges of the state with a view of organizing a series of health education lectures in the colleges similar to those now carried on in the high schools.

7. On motion of Dr. Warnshuis, Secretary of the State Medical Society, the Joint Committee was invited to meet in conjunction with the Medical Council, the date to be announced later.

W. W. Henderson, Secretary.

ANNUAL MEETING

The 108th annual meeting has gone down in our records. Appraisals have been made of former sessions, none of which were fraught with so great an interest, none recorded problems so important or momentous, none evidenced so great an earnestness of purpose. There were 807 names enrolled in the registration booth.

This issue contains the official minutes. We urge, yes implore every member to read these minutes in their entirety. Especially do we request that you dwell on the report of the Council. You will gain a true insight as to what your organization is achieving and the intensity with which a definite program of work is being executed.

Our eyes and purpose are directed forward. Much remains to be done. Our legislative program is of vital moment. Our program of post-graduate education is to become more inclusive. Our policy of public education is extended. What is proposed for our membership is of personal concern and importance. It is desired that as our progress is evidenced, that our combined membership subscribe a full measure of support. Your officers can evidence and will evidence executive direction, still to be most effective, membership support is extremely requisite—this is especially true in our legislative program.

This annual session cemented anew many friendships and evidenced emphatically our society's position in the life and work of every doctor. We congratulate the House of Delegates for its discernment, judgment and vision.

LEGISLATIVE PROGRAM

The House of Delegates directed the introduction, into the next session of the legislature, of the two bills presented by the Legislative Commission. This action demands a tremendous amount of work. The support of every County Society is important in the campaign that has been outlined. During the past month a letter has been addressed to every County Society requesting the appointment of a local legislative committee. If your society has not taken such action, we urge anew that you do so now.

A further request has been made, urging the organization of a local Woman's Auxiliary. This, too, is important, as a definite campaign of work has been planned to be assigned to the Auxiliaries.

We purpose keeping you informed through your local legislative committee.

WOMAN'S AUXILIARY

Elsewhere in this issue will be found the report of the annual meeting of our Woman's Auxiliary. Splendid progress has been recorded in its first year of organizational life. Much credit is due to its efficient officers, Mrs. Guy L. Kiefer, president, and Mrs. J. E. McIntyre, secretary.

There is a well recognized field and scope wherein the Auxiliary may serve advantageously for the welfare of the public and the profession. It is to that end that we urge state-wide organization.

To the Auxiliary we declare that we endorse their purposes most heartily and proffer to them the unlimited support of the society's executive offices in the furtherance of their work. We are eager to see our Auxiliary wield a large degree of influence in the communal life of Michigan.

Post-Graduate District Conference—A district conference for the members of the Fourteenth District will be held in Ann Arbor, at the University Hospital in November. The conference for the Eighth and Tenth Districts will be held in Saginaw on December 6 and 7.

Governor's Address—Be sure and read the address made by Governor Green at our annual meeting. It will be found as the first one of the original articles of this issue.

Your Local Programs—Whenever possible and so far as possible we will be glad to aid you in securing speakers for your county programs. One condition—give at

least a week of time to enable us to make the necessary arrangements.

Report of Meetings—It is for record and also inspiration to other County Societies that you are requested to send in reports of your local meetings. Please acquire the habit of reporting every meeting promptly.

Correspondence—Our society program for the next six months entails a large amount of correspondence. There will be a considerable number of letters addressed to county officers and committees. Will you please answer these letters promptly? We are dependent upon your replies. Please do not compel us to write two or three times upon the same subject to obtain an answer. Some secretaries and chairmen are prompt; others are dilatory. Please let promptness characterize your replies.

Thoughts While Mingling at the Annual Meeting—Everyone seems in excellent spirits—House of Delegates attentively earnest—Delegates seriously accepting responsibilities—Speaker ably resists stampeding—Exceptional committee reports containing much for reflection and action—Green convention button ever prominent—A fine line of exhibitors—Auxiliary officers and members ever in a flutter with a hundred questions and not yet emancipated from dependence on the male—A few lost hats every morning—Excellent attendance at all section sessions—Wonderful fruit from St. Joe and Benton Harbor—Guess we will have to meet there next—Jackson has some skilled sign writers and with "case history" landed the next annual meeting—A new speaker with stentorian voice and an aptitude to apply the lore of the ages to present-day activities—Eye, ear, nose and throat men increasing in number so as to require vastly larger quarters in the future—A lost preacher, but found in time to pronounce the benediction in place of the invocation—A governor who recognizes professional education and merits—Windsor's reputation continues—A fair number of Detroit members registering only to vote—Quite a flurry in the nominating committee's first session—Moving pictures appeared to arouse interest—Dancing apparently does not appeal to members who have their own notions of entertainment—Gynecology and Obstetrics made prompt deliveries without the use of pituitrin—Medicine was, as usual, profused with wordy pros

and cons—Surgery was extremely deliberate—Pediatrics had the snap and pep of kids—E. E. N. T. was impressive in its cranial crusading—Dinner dress is relegated to officers simply to show that free clinic inroads have not deprived us of habiliments of fashion—The Council evidenced frankly its conscientious discharge of the trusts reposed—President Randall was a pleasing visionage of dignity and fraternalism—No new orators were uncovered—Hours from 6:30 a. m. to 12:00 midnight are d— wearying and five days inside a hotel are intensely trying—Scientific exhibits arrested interest and evidently merit future extension—Nominating speeches are funny effusions, quite peripatetic—Governor Green said more than a mouthful, we are going to read his speech several times—With all meetings on one floor and with your room under the same roof it was very convenient for members, singly and in groups, to sneak up to their rooms between papers—Some four hundred members in section meetings when the last papers were read at 4 o'clock on Friday afternoon: that's going some—All sections adjourned at 4:15 p. m. Friday—At 6:30 all exhibit booths dismantled—7 p. m., in our car—First open air in five days—10:45, lights of our home town—12 m., in bed—Such in part was our 108th annual meeting—Read the official minutes in this issue—We are off on another new year—Gosh, there's a heck of a lot of work ahead of all of us.

New Members—For balance of year dues are \$2.50, including all benefits, Journal and Defense. Secretaries are requested to so note. Why not round up the eligibles in your county? Call in help to secure such membership increase.

14TH COUNCILOR DISTRICT POST-GRADUATE CONFERENCE, ANN ARBOR, UNIVERSITY HOSPITAL—
AUSPICES OF MICHIGAN STATE MEDICAL SOCIETY AND THE POST-GRADUATE DEPARTMENT IN MEDICINE, UNIVERSITY OF MICHIGAN

Friday, November 23, 1928

10:00—Demonstrations.

Department of Roentgenology; Simpson Memorial Institute; All Clinical Laboratories.

Visitors are also invited to attend any operative surgical clinics at this hour.

11:00—Subject to be announced.

Dr. C. G. Darling.

11:30—Dermatological Clinic.

Dr. U. J. Wile.

12:45—Luncheon—University Hospital.

2:00—Clinical Pathological Conference.
Pathology; Departments of Roentgenology; Medicine; Surgery.

3:00—Psychiatric Clinic.
Dr. A. M. Barrett.

3:30—Obstetric and Gynecological Clinic.
Dr. R. Peterson.

4:00—Medical Clinic—Malta Fever.
Dr. H. Field.

4:30—Surgical Treatment of Pulmonary Tuberculosis.
Dr. J. Alexander.

Saturday, November 24, 1928

Joint meeting with Pediatric and Infectious Disease Society of University of Michigan.

9:00—Significance of Recurrent Abdominal Pain in Early Life.
Dr. Paul Beavan, Rochester, N. Y.

9:30—Diagnosis of Abdominal Conditions in Children.
Dr. John Sander, Lansing, Michigan.

10:00—Experience with Diphtheria Toxoid.
Dr. Gustave Weinfeld.
Dr. M. Cooperstock.

10:30—What Shall We Do With Our Thyroids?
Dr. Richard McKean, Detroit, Mich.

11:00—Practical Points in the Diagnosis and Treatment of Minor Anal and Rectal Diseases.
Dr. Louis J. Hirschman, President
State Medical Society, Detroit, Mich.

UNIVERSITY OF MICHIGAN PEDIATRIC AND INFECTIOUS DISEASE SOCIETY

Roy M. Greenthal, M. D., *President*
William Lyon, M. D., *Vice-President*
John P. Parsons, M. D., *Secretary*

PROGRAM

University Hospital, Ann Arbor, Michigan

FRIDAY AFTERNOON

November 23, 1928—2:00 o'clock

Anorexia—
Discussion opened by Dr. Roy Greenthal.

Infantile Eczema—
Discussion opened by Dr. R. M. Kempton.

Pyloric Stenosis—
Discussion opened by Dr. Leon De Vel.

Transfusion—
Discussion opened by Dr. Samuel Levin.

FRIDAY EVENING

November 23, 1928—7:30 o'clock

Order of business.

Meeting called to order by the President.

Reading of minutes.

Election of officers for ensuing year—President, Vice-President, Secretary-Treasurer, Council.

President's Address—Nitrate Reaction with Spinal Fluid in Influenzal Meningitis.
Roy Greenthal, Milwaukee, Wis.

The Choice of Carbohydrates in Infant Feeding.
Rockwell M. Kempton, Saginaw.

Observations upon Pneumonias in Infants and Children. (By invitation).
Gordon Manace, Ann Arbor.

Anomalies and Diseases of the Rectum Occurring in Children.
George M. Brown, Bay City.

Studies on Several Cases of Scleroderma.
Leon De Vel, Grand Rapids.

Significance and Evaluation of Various Blood Chemistry Tests.
Katharine M. Jarvis, Ann Arbor.

Studies on Sensitization.
Samuel J. Levin, Detroit.

Significance of Skin Tests in Sensitization Cases.
John P. Parsons, Ann Arbor.

The following papers will be given if time permits:

Prophylactic Immunization in Scarlet Fever.
Arthur H. Steele, Northville.

The Use of Stuvoarsol in Treatment of Lues in Children.
Howard B. Mettel, Indianapolis.

Encephalitis in Children.
William S. O'Donnell, Detroit.

Local Immunization of Besredke.
D. Murray Cowie, Ann Arbor.

WASHTENAW COUNTY

First fall meeting of Washtenaw County Medical Society was held on Monday, October 1, 1928, at the University Hospital, Ann Arbor. Dinner was served at 7 o'clock.

The following program was held:

Symposium—Arthritis—

1. Rheumatoid Arthritis.
Dr. Willard Smith,
Simpson Memorial Institute.

2. Relation of Teeth to Arthritis.
Dr. Chalmers J. Lyons,
Prof. of Oral Surgery, University.

3. Orthopedic Problems in Arthritis.
Dr. V. L. Hart,
Orthopedic Department, University.

Discussion.

Reports from the Delegates to the Annual Meeting of the Michigan State Medical Society, Detroit, September 26, 27 and 28.

Theron S. Langford, Secretary.

GRATIOT-ISABELLA-CLARE COUNTY

The October meeting of our Society was held Thursday, October 4 at 6:30.

Twenty-two had supper together after which the report of Dr. C. F. DuBois, as delegate to the State Society was read, and on motion was placed on file.

President Barston then introduced Dr. L. H. Newburgh of the University Hospital who talked for nearly two hours on kidney disease. He divided it first into acute and chronic, the latter into chronic with edema, which is what we were taught was parenchymatous nephritis, and chronic intestinal, or Gull and Suttons arteriocapillary fibrosis.

Eighty per cent of the acute is caused by the toxin of a hemolytic streptococcus. The patient nearly always recovers.

The chronic with edema is always fatal in from

one to three years. Such a lecture has to be heard to be appreciated.

Dr. Newburgh brought along Dr. F. H. Lashmet, and asked him to describe a recent case of Addison's disease that they had in the University Hospital, which proved to be very interesting.

E. M. Highfield, Secretary.

HILLSDALE, BRANCH, ST. JOSEPH COUNTIES

The regular joint meeting of the Medical Societies of Hillsdale, Branch and St. Joseph Counties, convened at Mr. Geo. D. Schermerhorn's cottage, Crystal Beach, Coldwater lake, September 18 at 6 o'clock P. M.

The members were the guests at dinner of Dr. D. W. Fenton, secretary of the Hillsdale County Society.

After the dinner, the President, Dr. H. C. Miller, introduced Dr. G. A. Sherman of the University of Michigan, who gave a most instructive address on "The Diagnosis, Prognosis and Treatment of Pulmonary Tuberculosis." He illustrated his subject by films from both typical and unusual cases.

The address was very closely followed by those present and was fully discussed by Doctors McLain, Green, Sawyer and others. Dr. Sherman answered a number of questions from members. He then received a cordial vote of thanks from those present, about 27 in number. Those who were not present, certainly missed a most valuable and helpful address.

There being no other business, the meeting then adjourned.

D. W. Fenton, Secretary.

BERRIEN COUNTY

The Berrien County Society met in St. Joseph at the new Hotel Whitcomb on Thursday evening, September 20th.

A short business meeting was held after the 6:30 dinner, at which the application for membership of Dr. C. C. Jennings of Benton Harbor was received and referred to the membership committee. Authority was granted to the Secretary to issue the letter to the delegates to the state meeting, asking for their support to bring the 1929 state meeting to the Twin Cities of Benton Harbor and St. Joseph.

The address of the evening was given by Dr. R. Earle Smith of Grand Rapids.

Dr. Smith's paper was a very comprehensive one, reviewing the early lesions of lues by means of slides, preparatory to the gist of his talk, concerning the "Modern Treatment and Management of Syphilis."

Dr. Smith's slides were excellent colored illustrations, some of the best we have ever seen. In his talk concerning treatment, he briefly reviewed the various methods of treatment for the different stages. He then dwelt particularly on the latest treatment of neurological lues, laying particular stress on extensive treatment and effective treatment, with emphasis on the practitioner being lulled into a sense of security by a negative Wassermann.

An interesting and instructive discussion of the paper followed.

The next meeting of the Berrien County Society will be held in Niles at the Four Flags Hotel on October 24th.

W. C. Ellett, Secretary.

ALPENA COUNTY

Annual picnic of the Alpena Medical Society was held at the Long Lake Lodge, on August 20. Sixteen of the members were present. After the dinner the meeting was held in the city, where a number of movies were shown including one sent from the State Society, entitled "Infections of the Hand."

The monthly meeting of the Alpena County Medical Society was held at the Alpena House on Thursday, September 20, 1928.

Those present were—Doctors Cady, Powers, Campbell and Lohr of Saginaw, Reed and Chapman of Cheboygan; Carpenter, Woods, Cameron, Bell, Foley, Newton, Secrist, Schmaller, Williams, Alexander Garvey, O'Donnell, Nesbit.

The program was in charge of the Saginaw Medical Society.

The program was especially appreciated as each speaker had so familiarized himself with his subjects, as to make reading unnecessary.

Dr. O. W. Lohr had a general paper of Laboratory Diagnosis in which he renewed our interest in its value.

Dr. J. H. Powers' paper dealt with the Anatomy and Function of the Gall Bladder, and outlined the differential diagnosis of its diseases.

Dr. Lloyd Campbell described the Introduction of Labor. His description of the method of the use of pituitary extract in fifteen minum doses as a nasal pack was very valuable.

Dr. F. J. Cady spoke of the methods of diagnosis in acute and chronic sinusitis. Many points simplifying diagnosis and treatment were presented.

After the formal program was completed Dr. R. H. Woods of Mio, gave a characteristic, humorous talk on medical tendencies of the day. He declared that competition among hospitals was so keen, that the manufacturer of a low priced car who likewise conducted a large general hospital, now required all his agents to be circumsised.

Dr. S. T. Bell then made a presentation speech of a beautiful chimes clock to Dr. D. A. Cameron and his wife. This wedding gift was presented in a humorous vein. Dr. Cameron accepted the gift with a short speech.

The meeting adjourned with a vote of thanks to the Saginaw men who had participated in the program.

C. M. Williams, Secretary.

GENESEE COUNTY

Report of Secretary of Genesee County Medical Society 1927-1928:

Number of meetings.....	16
Number of speakers.....	16
New members elected.....	3
Average attendance at meetings.....	51

In the absence of the President and President-Elect Dr. W. H. Marshall was appointed to the chair. The minutes of the last meeting was read and approved.

The membership applications of Dr. G. C. Matthewson and Dr. W. S. Williams were read.

Dr. Cook reported on the activities of the auditorium furnishings committee.

Dr. Clarke D. Brooks of Detroit gave an ex-

cellent talk on "Acute Appendicitis." Discussion followed.

Meeting adjourned.

In the absence of the President and President-Elect Dr. W. H. Marshall was appointed to the chair. The minutes of the last meeting were read and approved.

Dr. C. H. O'Neil moved that Doctors Clayton K. Stroup, W. S. Williams and G. C. Matthewson be elected to membership in the society. Motion seconded and passed.

Dr. C. H. O'Neil moved that the incoming President appoint a committee of five members from the G. C. M. S. to confer with the charter revision committee concerning matters of importance to the County Society. Motion supported and carried.

Dr. M. S. Knapp reported on the activities of the auditorium furnishings committee and urged that prompt financial support be given the committee when requested.

Dr. H. Cook announced that a general staff meeting would be held at Hurley Hospital Friday evening, September 1, 1928.

Nomination of officers for the year 1928-29 were made:

President-Elect—Halligan, Don Knapp.

Treasurer—Robert Scott, Winchester, Flynn.

Medico-Legal Officer—C. H. O'Neil, J. C. McGregor, Miner, Diamond, Briggs, Cook, E. Burnell, H. White, Randall, L. Willoughby, Stevenson.

Delegates—Moll, Winchester, Benson, Reed, Manwaring, M. S. Knapp.

Alternate Delegates—M. S. Knapp, Marshall, Halligan, Manwaring, Reeder, Curry.

Dr. Alex M. Campbell of Grand Rapids, gave a talk on "The Opportunity of the General Practitioner in the Field of Gynecology." Discussion followed.

Meeting adjourned.

—M. S. Chambers, Secretary.

ST. CLAIR COUNTY

Regular meeting of this Society held September 20, 1928, at the Black River Country club, near Port Huron, Mich.

The following members assembled at 6:30 p. m. and enjoyed a splendid dinner: Doctors Smith, Burley, Windham, McColl, Grice, Waters, H. O. Brush and Porter, the latter being a visitor who recently moved from Owosso to Port Huron and is now engaged in practice here. After dinner the following members were present also: Doctors Treadgold, Caster and Kesl.

The meeting was called to order shortly after eight o'clock by President Smith. Six communications were read and placed on file. Two motions were adopted: one instructing our delegate and alternate to the state meeting to support the plan of the Legislative Committee to curb the chiropractors and other cults and one giving similar instruction to our delegate and alternate to support Jackson for the next state meeting. The Secretary was instructed to send word in some manner to all the members informing them of the invitation of the Kiwanis club of Port Huron to join with them to hear Dr. Christian at their next meeting, Tuesday, September 25, 1928. A round table discussion of the nursing situation in Port Huron followed in which all members present took part. This discussion covered not only the

trained but also the practical nurse. Dr. B. E. Brush read a list of laboratory procedures now being done by the new hospital technician, Miss Burke and also informed the Society that Miss Burke would, in emergencies, leave the hospital to make outside counts, etc., the charge in this case accruing to the hospital. The President asked the members present whether a childrens' eye, ear, nose and throat symposium would be acceptable to them for the next meeting and after discussion it was decided affirmatively. It was decided to hold our next meeting at the Black River Country club, October 4, 1928. A discussion also took place relative to the advisability of changing our meeting night from Thursday to some other day. Several stated desire to make such a change. Meeting adjourned at 9:05 p. m.

A regular meeting of this Society was held Thursday, October 4, 1928 at the Black River Country club near Port Huron, Mich.

Supper was served at 6:30 p. m. after which a social hour was spent by the members in attendance and their guests.

Dr. Angus McLean addressed the Society upon "Malignancy." His talk was very interesting and it is regretted the Secretary cannot give the whole verbatim. However, the Speaker emphasized the following points: that early diagnosis is very essential followed by early surgery, that when the need for radical surgery is apparent then the surgical treatment because of metastasis will not be successful, and that deep x-ray therapy is of no avail. The Speaker also stressed the point that colloids of gold and lead seemed to possess certain advantages in cases where surgery could not be used. The paper was discussed by many of the members present and the Society gave Dr. McLean a rising vote of thanks for his visit and address.

The following members and guests were present: President Smith, Heavenrich, Carney, Waltz, McKenzie, Bowden, Callery, Vroman, Attridge, Thomas, Lane, Ryerson, Caster, Waters, Clancy, Meredith, Battley, McColl, Patterson, H. O. Brush, Windham and Kesl. Guests, Doctors McLean, Warren, Porter.

The Secretary read an invitation from the Physicians' Club of Highland Park inviting the Society to attend the Third Annual Clinic of that organization to be held November 1. Four members signified willingness to attend this meeting and it was therefore decided to hold our regular meeting as usual on November 1, rather than attend the Clinic.

Dr. J. C. S. Battley was elected to membership in the Society.

The President asked Dr. George Waters to address the Society on pulmonary tuberculosis and the latter requested the Secretary to write Dr. VanderSlice for a series of twenty-two charts, x-ray photographs and other cuts and tables which portray childhood tuberculosis to use at this meeting which is to be held November 1, 1928.

The President announced the meeting of October 18, 1928 to be held at the St. Clair Inn, St. Clair, Mich., and stated that a symposium on the eye, ear, nose and throat conditions in childhood and infancy would be given at that time by Doctors Battley, Porter and Vroman with Doctors Treadgold and Shaefer as discussants.

Meeting adjourned at 10 p. m.

George Kesl, Secretary-Treasurer.

WOMAN'S AUXILIARY, MICH. STATE MEDICAL SOCIETY

MRS. GUY L. KIEFER, *President*
Lansing, Mich.

MRS. J. EARL McINTYRE, *Secretary*
Lansing, Mich.

ANNUAL MEETING

The first annual meeting of the Woman's Auxiliary to the Michigan State Medical Society was held in Detroit on September 27, 1928.

The Detroit auxiliary made arrangements for an open luncheon for all doctors' wives, to be held in the Blue Room of the Book-Cadillac hotel. The guests were seated at small tables and enjoyed a very agreeable hour together.

At the conclusion of the luncheon the state president, Mrs. Guy L. Kiefer, called the meeting to order.

Dr. Leon Fram of Detroit pronounced the invocation.

Mrs. Clarence Owen, president of the Detroit auxiliary, gave the address of welcome, and she was so sincere and her manner so pleasing that each guest felt herself given an individual welcome.

Mrs. Kiefer responded to the welcome in a few well chosen remarks.

The ladies were then entertained by Mrs. John Feldman of Detroit, who is a pianist of great ability and gracious personality. Her selections were so well received that she responded to several encores.

We next had the pleasure of hearing Mrs. Lebergott, also of Detroit, in two vocal numbers. Mrs. Lebergott was accompanied by Mrs. Poppin and they were a delight to their audience.

The Secretary's minutes of the last meeting were then read and necessary corrections made.

The report from the committee on constitution and by-laws was given, and it was moved and seconded that the constitution and by-laws be adopted as read.

The Secretary then read the by-laws, which were accepted and a vote taken, with all in favor of adopting the by-laws as follows:

BY-LAWS OF THE WOMAN'S AUXILIARY TO THE MICHIGAN STATE MEDICAL SOCIETY

Article 1—Name

The name of this organization shall be the Woman's Auxiliary to the Michigan State Medical Society.

Article 2—Object

The object of this Auxiliary shall be to extend the aims of the medical profession through the wives of doctors to other organizations which look to the advancement of health and education. To

assist in entertaining at all M. S. M. S. conventions, to promote acquaintanceship among doctors' families that closer fellowship may exist, and do such work as may be assigned from time to time, by the Michigan State Medical Society.

Article 3—Membership

The membership of the Woman's Auxiliary to the Michigan State Medical Society shall be composed of the County Woman's Auxiliaries recognized by the County Medical Societies.

Article 4—Officers

Section 1. The officers of this organization shall be a President, Vice-President and a Secretary-Treasurer. These officers, with the exception of the Secretary-Treasurer, shall be elected at the annual meeting to serve for one year or until their successors are elected. The Secretary-Treasurer shall be appointed by the President for one year. The officers, except the Secretary-Treasurer, shall be elected by ballot. No member shall hold the same elective office for more than two consecutive terms.

Section 2. The term of office of the officers shall begin at the close of the annual meeting at which they are elected.

Section 3. Nominations for officers shall be made by a nominating committee appointed by the President or may be made from the floor by members at the annual meeting.

Section 4. A vacancy occurring in an office shall be filled by the President for the unexpired term.

Article 5—Duties of Officers

The duties of the officers shall be such as usually devolve upon such officers and as are in accordance with the parliamentary authority adopted by this organization.

Article 6—Meetings

Section 1. A regular meeting of this organization shall be held at the same time and place as that of the Michigan State Medical Society. A notice of this meeting shall be sent by the Secretary to each member of the Executive Board and to each County Auxiliary at least thirty days before the meeting.

Section 2. Each County Auxiliary shall be entitled to be represented at the meetings of the organization by any members in good standing.

Section 3. Each auxiliary shall be entitled to one delegate for each twenty-five or major fraction thereof, who shall constitute the voting pole of the session.

Section 4. Twenty-five members shall constitute a quorum at any meeting of the organization.

Article 7—Executive Board

Section 1. The officers and chairmen of standing committees shall constitute the Executive Board.

Section 2. A regular meeting of the board shall be held immediately before and after each annual meeting of the organization. Special meetings may be called by the President and may be

called upon the written request of four members of the board.

Section 3. Four members of the board shall constitute a quorum.

Section 4. The Executive Board shall have all power and authority over the affairs of the organization during the interim between its meetings, excepting that of modifying any action taken by the organization and provided that no debt or liability except for current expenses shall be incurred by the board.

Article 8—Dues

County auxiliaries shall establish their own annual dues. Each county auxiliary shall pay one dollar per capita for membership to the state auxiliary of which 25 cents shall be remitted to the national organization. Dues shall be payable on or before April 1 of each year, official year of the auxiliary beginning January 1.

Article 9—Standing Committees

Such standing committees shall be appointed annually by the President as may be deemed necessary. Each standing committee, through its chairman, shall submit a plan of work on or before October 1st of each year to the President for approval, and no work shall be officially undertaken without such approval. Written annual reports shall be made by all committees.

Article 10—Parliamentary Authority

Roberts' Rules of Order shall govern this organization in all cases in which they are not inconsistent with these by-laws.

Article 11—Amendments to By-Laws

These by-laws may be amended by a two-thirds vote at any annual meeting provided the amendment has been proposed by the Executive Board or by a County Auxiliary or by a committee authorized by this organization, and has been sent to the Secretary-Treasurer and a copy of the proposed amendment has been sent by her to each member of the Executive Board and to each County Auxiliary with the call for the meeting. However, notice of an amendment to the by-laws may be tendered at an annual meeting which shall lie on the table twenty-four hours before being voted upon.

Mrs. Kiefer then asked for the report of the nominating committee. The committee composed of Mrs. Karl Brucker of Lansing, Mrs. E. S. Peterson of Jackson and Mrs. H. R. Leibinger of Detroit made the following recommendation, that the President, Mrs. Guy L. Kiefer, be continued in office for another year.

Mrs. Crane of Kalamazoo, who presided during the time the report of the nominating committee was made, asked that the constitution we adhered to and the election be by ballot. This was done and while the vote was being cast and tellers were collecting same, Mrs. Crane made the suggestion that the Secretary send an expression of sympathy from the auxiliary to Dr. West upon the loss of his wife, Mrs. West, who was the first Vice-President of the auxiliary.

The tellers completed their work and Mrs. Brucker of the nominating committee reported that Mrs. Kiefer had been unanimously elected president.

The committee then reported the name of Mrs. Harris of Jackson for Vice-President. A vote was taken and Mrs. Brucker reported Mrs. Harris elected as Vice-President.

Mrs. Kiefer made a short speech of acceptance, and a rising vote of thanks from all County Auxiliaries present was tendered Mrs. Kiefer on her acceptance.

A telegram from Mrs. John McReynolds of Dallas, Texas, retiring President of the National Women's Auxiliary, was read to the members in which she urged the use of health films and asked that the State Auxiliary sponsor this work. It was moved and seconded and carried that a copy of Mrs. McReynold's telegram be sent to the various auxiliaries.

The Secretary-Treasurer's annual report was read and accepted as read, and placed on file.

The next paper given was the President's address delivered in a very convincing way by Mrs. Kiefer. The address follows:

PRESIDENT'S ADDRESS

Ladies of the Women's Auxiliary:

A little more than a year ago—at the Annual Meeting of the State Medical Society held at Mackinac Island—the Woman's Auxiliary was organized. After the election of officers and the appointment of an Executive Committee it at once became the duty of these officers to extend the new organization by the addition of as many county units as possible. Just how successful our efforts have been you will know after you have heard the report of the Secretary. Suffice it to say here that your officers have been busy at their desks, at their telephones and with visits to a number of counties, looking toward an extension of the work. The doctors' wives on the whole have responded quite enthusiastically to the formation of Women's Auxiliaries although there are some counties in which the response was not so good.

The principal problem that has confronted us has been the uncertainty as to just what shall be the function of the Auxiliary. It is easy to say that we are what the name indicates "an auxiliary or help" to the doctors, but just how can we show that such an auxiliary society can be of help to the organized medical profession? In the first place, it is axiomatic to say that we, the doctors' wives, certainly desire to be aid to our husbands and again it is just as evident that if we are organized we can be of more aid than as individuals. "United we stand, divided we fall" is an old proverb which is as true as it is ancient. But just how can this organization be most useful is still the question.

This year and the ensuing one happen to be of especial importance as this fall members of the State Legislature will be elected and next winter they will be in session in Lansing. The doctors of

the state are always interested in medical legislation and, I am informed, that at this very meeting the State Medical Society is considering medical legislation and that they are particularly interested in a proposed law which will prescribe the educational qualifications of applicants for a license to practice the healing art in any way whatsoever. It would seem to me to be our first duty in each of our counties to get in touch with the County Medical Society, find out just what legislative measures the society favors and get back of such proposed laws by letting the legislators know that the women of their communities are for this or that act because they believe it to be of benefit to the public at large.

It is the policy of the State Department of Health to work through the doctors of the state and here again the women can be of great service. There are many ways in which we can help to cement the friendly and co-operative relations which should and do exist between the local boards of health throughout the state, as well as the State Department of Health, and the medical profession. Let me talk for just a moment about the organization of County Health Units. I know something about this subject because my husband, as your State Health Commissioner, is intensely interested. County Health Units exist in all but eight states in this union and a year ago, I might have said "in all but nine states" and the ninth state is Michigan. In other words, there were no County Health Units in Michigan until last year. Now there are three such organizations. The County Health Unit was made possible by a law which was passed by the legislature of 1927. This law gives the Board of County Supervisors the right to establish such a health unit and place it under the general supervision of the State Health Commissioner. The supervisors appoint the County Health Officer and under the rules of the State Health Commissioner, he must be a doctor of medicine. It is the policy of the present State Health Department to present their plan of organization of a County Health Unit to the County Medical Society first, and only when said medical society approves of the plan does the State Department of Health appear before the Board of Supervisors to urge the establishment of a unit. The plan has been approved by many County Medical Societies but a few have disapproved it. I am sure that such disapproval is in each case due to a misunderstanding. The County Health Unit functions for the benefit of the doctors as well as for the laity. At present there have been established, as I have said, three such units in Michigan, viz., in Oakland, Saginaw and Wexford Counties. At a meeting of the Women's Auxiliary to the Missouri State Medical Association, held in Columbia on May 15 and 16, 1928, Dr. M. P. Ravenel, Professor of Hygiene and Preventive Medicine at the University of Missouri, talked on this subject and I quote him briefly: 'This is a day of fads and isms. The organization of a County Health Unit, always with the approval and co-operation of the local medical society, is the best and most logical way to educate the public to turn to the physician, instead of to the fad of eating yeast or walking on all fours. Therefore, in my opinion, you will best benefit the medical profession as well as the laity by trying in a tactful and dignified way to further the organization of the County Health Unit and by working under and through the County Health Unit with the approval of your local medical society.'

Another way in which we, as a society, can be

of service and aid to our doctor husbands is by co-operating with the Extension Division of the University of Michigan in its Public Health Education Program. This program is prepared each year by the Joint Committee on Public Health Education and the Joint Committee was formed on the initiative of the Michigan State Medical Society. To quote from the latest program dated July 28: "The function of the Joint Committee is to present to the public the fundamental facts of modern scientific medicine for the purpose of building up sound public opinion relative to the questions of public and private health. It is concerned in bringing the truth to the people, not in supporting or attacking any school, sect or theory of medical practice. It will send out teachers, not advocates."

In closing, I wish to quote Mr. Hoover who has put the thought of health and education into a statement so startling and so forcible that I wish to place it as a goal for our state organization. Mr. Hoover says:

"Fifteen years of really concerted, organized, scientific effort for health, especially of our children will advance our nation physically, mentally, morally and economically, three generations."

Could there be a more worthy aim, a more patriotic cause?

I have pointed out three separate and distinct pieces of work which our auxiliary may adopt as its program. Any or all of these matters are of importance and I would most respectfully recommend them to you for your careful consideration.

MRS. GUY L. KIEFER,

President of the Women's Auxiliary
Michigan State Medical Society.

It was moved and seconded that the report of Mrs. Kiefer with her recommendations for future work be adopted. Vote was carried.

The President then introduced Dr. Lillian Smith of the Michigan Department of Health who talked on "Maternal Mortality in Michigan." Her paper was most interesting and her audience was entirely wrapped up in her message. At the conclusion of her address Mrs. J. R. Rupp of Detroit made the motion, which was seconded, that the Secretary write the State Department of Health asking the department to send each county medical organization suggestions and recommendations for the auxiliary, sanctioned by the County Medical organization, that will enable each Auxiliary to carry on practical work in reducing the maternal death rate therein. Carried.

There being no further business the meeting was declared adjourned.

Mrs. J. E. McIntyre, Secretary.

The first annual meeting of the Woman's Auxiliary to the Michigan State Medical Society was a success from every angle.

The Detroit auxiliary was a model of hospitality and friendliness. Everything was done in the way of entertaining the visitors and the Detroit ladies may well

feel satisfied with themselves. Luncheons, bridge parties, golf tournaments, a beautiful ball and every form of entertainment was offered for the pleasure of the guests. Any one who could attend and did not may feel disappointed. Each year the state auxiliary is in existence the annual meeting will grow better and it is an assured fact that all who attended this meeting will make a very determined effort to attend the next one, with Jackson the hostess.

REPORT OF DUES RECEIVED UP TO
SEPTEMBER 27, 1928

Calhoun	\$ 6.25
Ingham	6.50
Jackson	8.25
Kalamazoo	9.25
Saginaw	8.25
Wayne	32.50
Total	\$71.00

Check for \$15.75 was mailed to national secretary on November 1, 1927. Check for

\$55.25 was mailed to national secretary on June 30, 1928, making a total of \$71.00
Mrs. J. E. McIntyre, Secretary.

COUNTY AUXILIARIES ORGANIZED

- Mrs. E. S. Peterson, President, 605 So. Jackson St., Jackson.
Mrs. R. J. Hubbell, President, 2333 So. Rose, Kalamazoo.
Mrs. Clarence I. Owen, 1544 Vinewood, Detroit.
Mrs. J. G. Maurer, Reese.
Mrs. H. C. Rockwell, Lansing.
Mrs. A. W. Herrick, 1712 Center, Bay City.
Mrs. Dr. Nettie Knapp, Battle Creek.
Mrs. Guy C. Keller, Hastings.
Mrs. F. C. Brandy, Sault Ste. Marie.
Mrs. W. H. Sawyer, Hillsdale.
Mrs. C. H. Westgate, Morenci.
Mrs. W. B. McWilliams, Maple Rapids.
Mrs. E. B. Stebbins, 653 McLeod Avenue, Ironwood.

THE DOCTOR'S LIBRARY

Offering Suggestions and Recommendations

A TEXT BOOK OF SURGERY—W. Wayne Babcock, M.D., F.A.C.S., Professor of Surgery and of Clinical Surgery in the Temple University, Philadelphia; Surgeon to the Samaritan Hospital and to the American Hospital for Diseases of the Stomach. Octavo of 1367 pages with 1050 illustrations, 9 of them in colors. W. B. Saunders Company, Philadelphia and London, 1928. Cloth, \$10.00 net.

Dr. Babcock has written this surgery with the thought in mind that actual clinic and bedside instruction have superseded to a large extent the didactic lecture. The contents are made up of subjects usually treated in a single volume treatise on surgery. The book is intended to meet the requirements of the undergraduate as well as the practising surgeon. While surgery is a growing science, the all important subject is surgery as it obtains today rather than the past, or what it will be in the remote future. The author has omitted the historical aspects of surgery which, of course, are adequately taken care of elsewhere. He has endeavored to present prevailing teaching and practice as he says, "I have written in a dogmatic vein what practice and study have made me believe as true today. If tomorrow I progress to an opposing point of view, I shall not lose faith. I shall still be dogmatic." This point of view is rather to be admired. The book endeavors to standardize approved surgical treatment. One whole section consisting of eight chapters has been devoted to surgical technic. The day of the carnivorous surgeon who crushed and tore his way through the tissues has passed. To use Dr. Babcock's expression, "the day of artistry, delicacy and finesse has been ushered in." The author has retained the nomenclature which the student has already acquired in the anatomies of Gray, Morris, Cunningham and

Spalholz. The work is beautifully illustrated with drawings by the surgical artist, also line drawings and radiographs. Nine plates are in colors. Although the book contains nearly 1,400 pages, the format is such as to make it convenient for study and ready reference.

RECENT ADVANCES IN SURGERY—W. Heneage Ogilvie, M.A., M.D., M. Ch., Oxon., F.R.C.S. England; 108 illustrations, pages 461. P. Blackiston's Son & Co., Philadelphia, Pa.

The author recognizes the fact that surgery advances along different routes in different countries. The present volume deals more particularly with the recent advances as they obtain in Great Britain. Among the subjects treated are shock and hemorrhage, cancer, neuro surgery, the thyroid and parathyroid, the heart and blood vessels, chest surgery, gallbladder surgery, and surgery of the bones, joints and muscles. He notes three eras in surgery since the realization of the importance of antiseptics, respectively the stage of conquest, from 1880-1890, establishment from 1900-1920, and consolidation from 1920-1928. He speaks of the great impetus of the Great War to the advance of surgery. Operative surgery has been so standardized and simplified according to this author that any young man of and great capacity for self criticism should be intelligence and industry, a pair of good hands, a reliable operator after five years' special study and experience. A significant sentence is the following, "Leadership in surgery is passing from the operator to the thinker from the man of strong hands to him of skillful judgment who knows when operation should be postponed or

avoided." This little book is adequately illustrated.

A POCKET MEDICAL DICTIONARY giving the pronunciation and definition of the principal words used in medicine and the collateral sciences including very complete tables of the arteries, muscles, nerves, bacteria, bacilli, micrococci, spirilla, and thermometric scales, and a revised dose-list of drugs and their incompatibilities, in the English metric systems of weights and measures, based upon the tenth revision U. S. pharmacopoeia; also a revised veterinary dose table; by George M. Gould, A. M., M. D., author of "The Illustrated Medical Dictionary," "The Practitioner's Dictionary," etc.; ninth edition revised, over 40,000 words; P. Blackiston's Son & Co., 1012 Walnut street, Philadelphia, Pa.

Gould's Medical Dictionary has been before the medical profession so long that it needs very little by way of introduction. It is proverbial that a medical book ten years old is practically useless, so rapid have been the advances in medical science. If this be true, it goes without saying that in keeping with this growing medical literature we should have fairly frequent revisions of the medical dictionary; in fact, it is a question if medical terminology does not increase more rapidly than the discoveries which find a permanent place in medical literature. In preparing this pocket medical dictionary the lexicographer has endeavored to be as conservative as conditions permit and has included the new words that appear likely to be of permanent value. In addition to the purely dictionary portion is the physician's dose table which is brought up to date and which gives the doses in parallel columns in both apothecary and metric system. The work is very attractively bound in leather and its size makes it a convenient desk companion.

THE OPIUM PROBLEM—Charles E. Terry, M. D. and Mildred Pellens. The committee on drug addiction in collaboration with the Bureau of Social Hygiene, Inc., New York, 1928.

The opium problem has been before the public eye for many years and many of the reports given out by the press are contradictory and unscientific. This volume consists of the condensed reports and surveys of the opium problem in the United States and is therefore of great value to those wishing to obtain a wider and more scientific interest in the problem. The extent of the work is covered very thoroughly by reports and surveys from all parts of the United States. The report of the state of Michigan, published by Marshall, is of interest. The state census taken in 1874 was 1,334,031, of this number 7,763 used opium in some form. The statistics were taken after eliminating underworld influences such as prostitution and gambling. The volume covers the development of the problem, the etiology and general nature of the chronic opium problem, and gives scientific reports of the effect on the human body with pathological changes. There is a very interesting chapter on the types of users, classified according to sex, age, environmental influences and effects of opium on crime.

This volume is a condensed bibliography of the committee work since its organization in 1921 and gives a clear appreciation of the existence of this great complex problem arising out of the use of chronic opium and associate drugs.

SYPHILIS—Charles C. Demier, 304 pages. Price \$2.50. Harper & Bros.

A valuable reference book.

RECENT ADVANCES IN SURGERY—W. H. Ogilvie, England. 461 pages, illustrated. P. Blackiston's Son & Co.

An excellent resume.

BACTERIOLOGY FOR NURSES—Charles F. Carter, M. D. C. V. Mosby Co., St. Louis. Price \$2.25.

A suitable and ample text for nurses.

RECENT ADVANCES IN CHEMISTRY—W. McKin Marriott, M. D., 140 pages. C. V. Mosby Co., St. Louis. Price \$2.50.

This consists of a series of lectures delivered before the San Diego profession. The author, recognized as authority, capably correlates these advances with practices of today. A delightfully instructive brochure.

BLOOD AND URINE CHEMISTRY—R B. H. Gradwohl, 528 pages. C. V. Mosby Co., St. Louis. Price \$10.00.

A text for laboratory workers—an excellent source of information and instruction for the practitioner. Its complete covering of detail makes it the more useful. An inspiration to the doctor for it encourages more and wider use of these diagnostic examinations. We recommend this text most heartily.

THE DUODENUM—P. Duval and J. C. Roux, Paris. C. V. Mosby Co., St. Louis. Price \$5.00.

Imparting medical, radiological and surgical studies. Of interest but leaving many noted questions unsolved—helpful however in imparting reasons for certain clinical conditions.

MODERN METHODS OF TREATMENT—Logan Clendening, M. D., second edition, 813 pages. Price \$10.00. C. V. Mosby Co., St. Louis, Mo.

A mint of helpful and dependable measures and methods used in treatment. Certainly, no doctor can find so concise a therapeutic guide that will be more helpful. It is a desk reference text of everyday usefulness. We are personally dependent upon it daily.

CLINICAL GYNECOLOGY AND OBSTETRICS—R. T. La Vake, M. D., Minneapolis. Price \$4.00. C. V. Mosby Co., St. Louis, Mo.

A meritorious handbook for student and under graduate.

SYPHILIS—H. H. Hazen, M. D. Second edition. Price \$10.00. C. V. Mosby Co., St. Louis, Mo.

An authoritative coverage of the entire subject. Excellent in its thoroughness.

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In many cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

MEDICAL DISCOVERIES BY YOUNG MEN

In a recent issue of the Journal of the American Medical Association appears the following list of great discoveries made by comparatively young men:

William Harvey described the circulation of the blood in 1628, at 50.

Thomas Bartholinus described the existence of the thoracic duct in 1652, at the age of 36.

Jan Swannsudam observed red corpuscles in frog's blood in 1658, at the age of 21.

John Abernethy was the first to ligate the external iliac artery for aneurysm in 1796, at the age of 32.

Ephriam McDowell performed the first ovariectomy in 1809, at 38.

Joseph Priestley discovered nitrous oxide in 1772, at the age of 39.

Rene Laennec invented the stethoscope in 1815, at the age of 34.

Crawford W. Long performed the first operation with the patient under the influence of ether in 1842, at the age of 27.

William Thomas Green Morton used ether in 1846, at the age of 27.

Lord Lister communicated his successful results in antiseptics to a meeting in 1867, when he was 40 years of age. He had graduated twelve years before.

Robert Koch discovered the tubercle bacillus in 1882, when he was 39.

Von Behring first used diphtheria antitoxin in 1890, when he was 36.

Frederick Banting discovered insulin in 1923, when he was 31 years old.

Madame Curie did her work on radium in 1899, when he was 32 years old.

Darwin did his work on the origin of species at 29 years, and Wallace his at 36 years.

Pasteur's epoch-making discoveries started with his work on ferments when 35 years old.

Servetus published his discovery of the blood circulation when 44 years old.

Eustachius completed his anatomic tables when 28.

Vesalius swept away Galen's anatomic errors with his *Fabrica* when 29.

Fallopian completed his remarkable discoveries before he died at 39.

Ehrlich discovered mast cells and began his stain work when 23 years old.

Pare performed the first exarticulation of the elbow when 26 and published his book on gunshot wounds when 35.

Jenner began his observations on vaccination when not yet 30.

Lavoisier discovered oxygen when 32.

Neisser discovered the gonorrhea bacillus when 24, and Schaudinn *Spirochaeta pallida* when 34.

Bichat published his treatise on membranes when 28.

Semmelweis recognized the infectiousness of puerperal fever when 29.

Skoda systematized percussion and auscultation when 34.

Widal suggested his typhoid test when 34.

Claude Bernard, when 30, had already started his study of the glycogenic function of the liver.

Von Helmholtz, at 26, established the law of conservation of energy.

Du Bois-Reymond, at 25, discovered the difference of potential between the cut and the uninjured ends of an excised muscle or nerve, and defined electrotonus.

Velpeau published the first detailed work on surgical anatomy when 28.

Carl Ferdinand von Graefe, when 29, devised the operation for cleft palate and founded modern plastic surgery, and his son Albrecht described keratoconus when 26 and introduced iridectomy in several eye conditions when 27.

Bell began publishing his anatomy when 30.

Hodgkin described the disease still bearing his name when 34.

Ricord established the differentiation of gonorrhea and syphilis when 32.

TEA IMPORTATIONS DECLINE

From the physician's point of view, the problem of the use of tea and coffee in the diet seems to be concerned primarily with the methylated purines, notably caffeine, which they contain. The interdiction of these beverages has become common in the formulation of dietaries for children. For example, in a recent field study of certain Massachusetts rural towns to ascertain what relationship, if any, could be demonstrated between the dietary habits of children of elementary school

age and their state of health, in scoring the diets a deduction of points was made for the regular use of either coffee or tea. This is undoubtedly in accord with current nutritional advices for adolescents. Furthermore, the consumption of substitutes for tea and coffee has grown in this country. One wonders, therefore, whether these national tendencies bear any relation to the decline in tea importations recently reported by the U. S. Department of Agriculture. The official statistics indicate that, despite continued growth in population, nearly six and one-half million pounds less tea was imported during the fiscal year ended June 30, 1928, than during the previous year. This represents a decrease of 7 per cent. In contrast with this is the governmental announcement that caffeine-containing drinks other than tea and coffee are now being used extensively with meals at lunch counters, cafeterias and similar eating places. Especially is this true where lunches are served at soda fountains in drug stores, cigar stores, and other places. Since a large proportion of tea utilized in the United States is served in the form of iced tea, it is believed that the use at meal times of drinks to which caffeine has been added has been another cause of the falling off in the consumption of tea. Those who have hopefully anticipated a decrease in the "caffeination" of the nation will be further disconcerted by the information that of several million pounds of tea waste, tea siftings and tea sweepings imported under government regulation "for manufacturing purposes," practically all are reported to be converted into caffeine, a large portion of which is used in the preparation of various caffeinated soft drinks. It would seem almost as if the methylated purines were being converted in status in an insidious manner from a drug to a food.—*Jour. A. M. A.*, Sept. 1, 1928.

RELAXATION CURE FOR NERVOUSNESS

Complete relaxation, deeper than the average sleep, is the treatment for certain nervous disorders evolved by Edmund Jacobson, research associate in physiology at the University of Chicago. The new treatment is the result of a twenty-year period of clinical observation and laboratory research. Although he is continuing his experiments, Dr. Jacobson will publish his results soon in a book to be entitled "Progressive Relaxation."

The "relaxation," which concerns all the voluntary muscles of the body, is described by Dr. Jacobson as "entirely different, yet related to the popular idea of muscular relaxation." That is, if a person lies down to rest, he relaxes most of his major muscles, but the complete relaxation achieved by Dr. Jacobson on his patients and laboratory assistants really begins at this point. Starting with tension of muscle groups, including the smaller muscles such as those of the neck, eyes, fingers and toes, the individual is advised to avoid all sensation of tenseness. Experiments on the knee jerk and with electrical stimulation indicate that trained individuals are able to achieve a state of relaxation deeper even than that of the average sleeper.

"Insomnia yields readily to this treatment," said Dr. Jacobson, "and all the cases of chronic spastic colon or esophagus to which I have had access, have shown marked improvement or cure."

Spastic colon and esophagus are conditions of the upper and lower portions of the alimentary canal in which nervousness of the patient results

in more or less permanent contraction with severe discomfort and pain. X-ray photographs of these regions before and after relaxation treatment reveal the improvement.

"This is a case," said Dr. Jacobson, "in which relaxation of the voluntary muscles induces relaxation of the involuntary muscles. In addition to this undeniable relief for nervous persons, it is my belief that complete relaxation periodically, should have a tonic effect upon the entire system with general elevation of health and resistance to disease."—Science Service.

"BIOS", YEAST VITAMIN, SEPARATED AND CRYSTALLIZED

(By Science Service)

"Bios", a substance that promotes growth in yeast as vitamins do in animals, has been demonstrated to be really two substances, and one of these two "bioses" has been prepared in pure crystalline form in the laboratory of Professor W. Lash Miller of the University of Toronto. It proves to be a form of a seldom-studied but long-known chemical compound, inosite.

In 1901, long before vitamins were discovered, a Belgian chemist named Wildiers found that yeast needed for growth small quantities of some unknown substance which he could not isolate. He gave to this unknown material the name "bios", which is the Greek word for "life". After the discovery of vitamins, scientists began to take interest in this vitamin-like stuff needed by yeast, but it still defied separation and chemical analysis.

Then various researchers in Professor Miller's laboratory began a systematic attack on the problem. One of them discovered that if a bios solution were shaken up with fine charcoal some of the bios vanished into the charcoal and what was left could not help yeast to grow. The part that was left could also be cleared out of the solution by other chemical means. This indicated that there was not one bios, but two; accordingly the names Bios I and Bios II came into use.

The latest advance has been to purify Bios I into crystal form. Crystals are the chemist's test for purity; a mixture will not crystallize. The crystals obtained have been analyzed and shown to contain the same proportions of carbon, hydrogen and oxygen as common glucose, but the chemical arrangement is much more complex.

Bios I, or inosite as it has now been proved to be, is abundant in young, vigorously growing plant shoots. The German investigators who first studied inosite obtained their material from bean sprouts. The Canadian scientists who purified Bios I and established its chemical identity, bought up large quantities of tea siftings for their raw material.

CHOLECYSTOGRAPHY IN PRESENCE OF ACHYLIA GASTRICA

The attention of Laurence E. Hines, Chicago, was directed to the possibility that gastric acidity might have some influence on cholecystography by the observation of three patients, whose gall-bladders could not be visualized by the intravenous method and whose clinical history did not suggest gallbladder disease. These patients did not show any free hydrochloric acid in the gastric contents after a test meal. Of ninety patients who had gastric analyses and Graham-Cole tests, there were eight who had an achlorhydria, and in all the cholecystographic response was abnormal. The table which summarizes the important

features of the eleven cases in the author's series of eleven cases there was no shadow in seven, and abnormalities, such as faint shadow, slowness in filling, or failure to empty after a fat meal, in the remaining four. A further observation of particular significance was the production of a faint gallbladder shadow in tests, which were repeated after the patient had been given hydrochloric acid.—Journal A. M. A.

FRACTURES OF LUMBAR VERTEBRA DUE TO HYPEREXTENSION AND EXTREME MUSCULAR ACTION

Clifford Lee Wilmoth, Baltimore, reports 17 cases of fracture of the lumbar vertebra due to hyperextension and extreme muscular action. He says that fractures of the transverse processes or chip fractures of the lumbar vertebra are of relatively frequent occurrence and are due to forced hyperextension of the spine or to sudden extreme muscular action. There may be a history of only the slightest trauma. They are frequently not diagnosed because the history of so slight a trauma, to some, does not seem an indication for a roentgen-ray examination. A roentgenogram taken in two planes is indicated in all cases of so-called back strain, even though the history of the trauma may seem insignificant. Patients with fractures of the transverse processes, undiagnosed, and treated as back strain, with deep massage and early motion, continue to have pain and frequently are diagnosed as having traumatic neurosis. The early treatment of chip fractures of the bodies of the lumbar vertebrae, or fractures of the transverse processes, should be the same as for fracture elsewhere—rest and immobilization.—Journal A. M. A.

SCIENCE PREVENTED POST-WAR PLAGUE

(By Science Service)

The World War provided a great triumph for sanitary and medical science. Whatever its political and historical significance, its chief significance to sanitarians and medical men is that for the first time in the history of the world, the number of wounded in a war exceeded the number attacked by disease. The great epidemics, amounting to plagues, of typhoid fever, smallpox, venereal diseases, and dysentery and related diseases that have followed every other war, causing enormous mortality in troops and civilian population, were conspicuously absent after this last war.

The great advances in medical science during the last 30 years are credited by Dr. R. C. Williams of the U. S. Public Health Service, with this accomplishment. Vaccination for smallpox, protective inoculation for typhoid fever, purification of water supplies and preservation of foods, vitamins and other dietary factors, prophylaxis and improved methods of treatment of venereal diseases, were able to keep the incidence of these diseases down to a minimum. The only epidemic comparable to the plagues of old was the outbreak of influenza toward the close of the war and just after. The enormous spread of this disease was due to the suddenness and unexpectedness of its onset, together with the fact that scientists knew very little about it or how it was transmitted. In spite of this, the few uninfected areas in which strict quarantine could at once be instituted escaped with relatively few cases.

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PRESENT NEEDS IN MICHIGAN FOR THE CARE OF THE INSANE AND FEEBLEMINDED

ROBERT H. HASKELL, M. D.

Medical Superintendent Wayne County Training School.

NORTHVILLE, MICHIGAN

The needs of any state for the care of its insane and feeble-minded can be predicated from the application of various facts and figures based upon knowledge of the situation in other states and checked by other facts and figures obtained from a study in the given state of its methods and standards of allied welfare work. There is no state today which does not provide some degree of state program for the care and treatment of its mentally sick. There are five states today, Arkansas, New Mexico, Arizona, Utah and Nevada, that provide no separate state institution for the feeble-minded. January 1st, 1923, there were in all state institutions for the insane in the United States 267,617 patients; i. e. 245 patients in mental hospitals for every 100,000 persons in the general population. On that same date there were in all in-

stitutions for the feeble-minded throughout the United States 42,954 persons: a rate of 39.3 persons for each 100,000 of population. On that same date there were 18,829 feeble-minded in state institutions for the insane and an additional 12,143 feeble-minded in almshouses.

Different states vary in the amount and character of care they provide for their mentally sick. At one pole is Massachusetts which provides 413 beds in state mental hospitals for each 100,000 of population: at the opposite pole is New Mexico with only 106 beds in mental hospitals for each 100,000 of its population. The average number of beds spread over the entire United States is 245 per 100,000 population. Michigan is providing today only 213 beds for each 100,000 population.

The same fluctuations obtain with re-

spect to state care of the feeble-minded. New Hampshire in 1923 provided the highest ratio with 88.1 beds in a state institution for each 100,000 of the population, while the average ratio spread over the entire United States was 39.3 beds per 100,000 population. Michigan on that same date was providing 54.8 beds per 100,000 population. That number has been increased today to a point where Michigan is providing approximately 65 beds in state institutions for the feeble-minded per 100,000 population.

It is not necessary then to defend the thesis of state provisions for the modern medical care of the insane, feeble-minded and epileptic. It is equally unnecessary to spend any great amount of time explaining the reasons for such variations in the ratios obtaining in different states. A glance at the map of the United States, charted according to the number of patients in hospitals for the mentally sick, of itself suggests some of the more patent reasons: the age of the state; the general character of residence of the population of the state, whether preponderantly urban or rural; the industrial activities of the people; the degree of density of population; the proportionate amounts of foreign born in the state; the degree of development of social conscience in its citizens; the professional standards of its public institutions; the confidence of the citizens in the character of service rendered by its organized agencies; the geographical accessibility of its institutions to the people of the state; and the degree of legal hindrance hedged about the sick or defective person's right to receive proper and early treatment without unnecessary, humiliating notoriety. These are the more important reasons that determine in large part the character and the amount of provision for care of mental disease and defect in any given state.

The subject assigned this paper was "Present Needs in Michigan for the Care of the Insane and Feeble-minded." This suggests that there are pressing present problems in Michigan in this field. There are today 2,050 persons at large in the State of Michigan who have been certified, under oath, by physicians, appointed by courts of the state, to be insane, feeble-minded or epileptic and to require for their own welfare and the welfare of the state that they be admitted into state institutions for the treatment of the insane, the feeble-minded or epileptic. This is no theoretical discussion of parlor sociology. This is a factual situation.

To understand this situation it is desirable to go back into the earlier history of the state. The first specific provision for the care of the insane was made by the Board of Superintendents of the Poor of Wayne County as early as 1834, three years before the incorporation of the state of Michigan, fourteen years before the state in 1848 made statutory provision for the care of the insane and twenty-five years before the Kalamazoo State Hospital, the first state mental hospital actually opened in 1859. It was then anticipated that the insane in the special building at the Wayne County Poor Farm would be received at the new state asylum at Kalamazoo but there were already so many insane in their homes, in jails, in poorhouses without separate quarters for the insane and in other asylums outside the state as far away as Utica, New York, that the new asylum was quickly filled to the exclusion of the Eloise patients. The Pontiac State Hospital was established by the Legislature of 1873 and admitted its first patients in 1878. This year of 1878 should be memorable in the history of Michigan's welfare work because it was then that the law providing for complete state care of the insane was enacted, prohibiting henceforth the detention or care of "any insane person in county houses, jails and other receptacles," thus committing the state to an adequate program which, however, has never yet completely eventuated. The Traverse City State Hospital was established by the legislature of 1881 and admitted its first patients in 1885. The Ionia State Hospital opened in 1885 and the Newberry State Hospital admitted its first patients in 1894.

There were three new state institutions for the insane opened and receiving patients within a period of nine years with not an additional one since in an interval now of thirty-five years.

The state institution for the feeble-minded, the Michigan Home and Training School at Lapeer, was established by the legislature of 1893 and received its first admissions in 1895.

The Michigan Farm Colony for Epileptics at Wahjamega received its first admissions in 1914. The Wayne County Training School at Northville for higher grade, trainable feeble-minded and borderline children, established under an enabling act of the legislature, admitted its first children in 1926.

The State Psychopathic Hospital at the University must not be overlooked in any such consideration, notwithstanding its

small size and lack of countless facilities that it should have. This was the first psychopathic hospital established in this country; authorized by the legislature in 1901 and opened in 1906. Its value to the state has been untold. It has a very rapid turnover and furnishes unusual facilities for certain early mental types that would not otherwise accept treatment. Its greatest value, however, has been as a co-ordinating force to energize co-operation among the various state hospitals, to furnish a means of presenting an adequate understanding of mental disorders to medical students and a center of scientific research in this field.

The present population of each of these institutions on September 30th, 1928, appears on Chart No. 1. The institutions of the state, including Eloise and Northville, providing care and treatment for individuals socially inadequate by reason of mental disease or defect, total then today a little over fourteen thousand; 14,178 on September 30th. There were in addition, as already mentioned, 4 insane persons committed and awaiting admission to the Kalamazoo State Hospital, 555 insane persons committed and awaiting admission to the Pontiac State Hospital; 483 insane awaiting admission to Eloise; 105 epileptics committed and awaiting admission to the Michigan Farm Colony at Wahjamega; and 903 feeble-minded committed and awaiting admission to the Michigan Home and Training School at Lapeer.

CHART NO. 1

POPULATION SEPTEMBER 30, 1928

Mental Disease—		
Kalamazoo State Hospital.....	2,567	
Pontiac State Hospital.....	1,691	
Traverse City State Hospital.....	2,073	
Newberry State Hospital.....	1,128	
Ionia State Hospital.....	647	
Eloise Hospital.....	1,879	9,985
Mental Defect—		
Michigan Home and Training School.....	2,872	
Wayne County Training School.....	510	3,382
Epilepsy—		
Michigan Farm Colony for Epileptics.....	811	811
		14,178

In 1915 Michigan was providing 285 beds in hospitals for the insane for every 100,000 in the general population. By 1928 this ratio of beds in mental hospitals has dropped until there are only approximately two-thirds of that ratio or 213 beds per 100,000 population. In this period the population of the state has increased from 3,225,000 to 4,600,000.

In 1915 it was recognized that the insti-

tutions were becoming crowded beyond the point where the welfare of the mentally sick patient could best be served and the need of a new state mental hospital was being discussed by those best informed. No such hospital has resulted to date.

To properly handle the needs of the increased demands for mental hospital care on the basis of 285 beds for each 100,000 of general population which Michigan actually was furnishing in 1915, there should have been provided in these thirteen years while the population was growing from 3,225,000 to 4,600,000, an additional 3,990 beds. No such increase was made or anything approaching any such increase. Since July, 1919, the State of Michigan has provided by legislative enactment in all institutions in the state caring for the insane, only 113 additional beds instead of the 3,000 to 4,000 demanded by the increase in population of the state. Wayne County has provided at Eloise practically one thousand beds.

What this situation means when carried back into the community is pictured in the number of 555 insane persons already committed to the Pontiac State Hospital and the 483 to Eloise but not admitted there because there is no space available for them. Countless mentally sick are not committed because there are no hopes of getting them admitted after once committed. The suffering that is entailed in the home obliged to continue to attempt the care of a mentally sick member of the family, the unnecessary additional economic loss in that home, the ultimate loss to the state in the permanent damage done to the evolving personality of childhood obliged to suffer the inevitable psychic traumata from such a patient in the home, the delayed convalescence of the sick person himself, all these are factors not statistically recordable but important beyond dispute.

It is not desirable to introduce any spirit of sectionalism into such a calm situation as the present but it may be well to consider that whereas the number of beds in mental hospitals in the state has dropped from an originally unsatisfactory rate of 285 beds per 100,000 population to the abjectly dismal rate of 213 beds per 100,000, the Upper Peninsula of the state is enjoying today the benefits of 312 beds per 100,000 population.

In 1926, Michigan was able to admit to its mental hospitals only 62.1 patients for every 100,000 in the state's population. New York was able to offer its state hos-

pital facilities to 97.3, Illinois to 109.2 and Massachusetts to 151.6 of its citizens for each 100,000 of population. When a state, following an adequate program, has been able to admit and treat its mentally sick citizens at a point early in the disease, then understanding treatment is most effective. Experience seems to show a flattening out at least of the curve of rate of admissions suggesting that therapeutic and preventive measures applied early enough may put a stop to the gradual increase in the incidence of mental disease, at least as registered by the demand for admission.

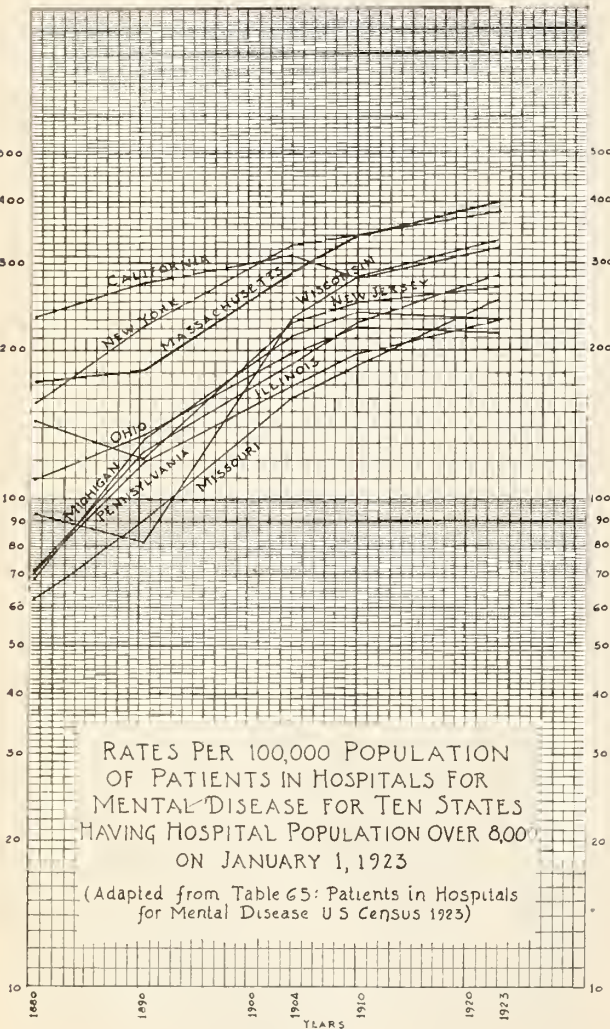


CHART NO. 2

This Chart shows the trend of provision for the care of the mentally sick in the ten states providing care in mental hospitals for the largest number of patients. It shows that all of these states with the exception of Michigan and Ohio have consistently shown an increase in the ratio of provision of hospital beds; while Michigan and also Ohio not only are the only states that have failed to show an increase in the ratio, but they have shown an actually decreased ratio.

How little Michigan has attempted to profit from any such measures is pictured graphically by the consistent changes of the past decade, a period when Michigan has been gathering international renown

for certain progress in various fields of welfare work; notably the tremendous increase in the provisions for the care of the crippled child, the care of the sick child and the sick adult, the tremendous development of its state educational system, its unprecedented concrete road program, to mention only a few of its more expensive developments. All these developments parallel its transformation from a quiet, largely agricultural state to probably the highest geared, highest speed, most specialized industrial state in the Union. Its wealth has increased. Its population has increased to where it has within its bounds the fourth city in the United States and is itself the sixth state in the Union in population. So far as any regard for the importance of the integrity of the mental health of its citizens is concerned, however, it has dropped to 28th place in the list of states in the Union arranged according to proportionate provisions of their care for the mentally sick.

This lack of adequate facilities for the care of the insane in Michigan is no new problem. We have already shown how the decline began as far back as 1915. The superintendents and the boards of trustees year after year showed in their reports to the legislature what the situation was and what was needed to meet it but without avail. The waiting list started building up way back in 1923. In May, 1924, a special committee of the State Hospital Commission, after deliberating five months on the problem, recommended to the State Administrative Board an emergency appropriation from the general fund of the state to construct immediately 400 additional beds at the Pontiac State Hospital, with such service increases in power plant, laundry, etc., as were needed, and the immediate development of Pontiac to a 2500-bed capacity, and more;

"Your Committee further recommends that this commission take the initiative in an effort to secure by legislation the establishment of another state hospital in the southeastern district, preferably in the vicinity of Ann Arbor."

Nothing resulted from this report beyond the legislature of 1925, a year later, appropriating \$150,000 for 125 beds, to be built during 1925-26 and \$250,000 for an imperatively needed power plant in 1927-28. No tax clause was added and up to this time the appropriation might just as well have not been made.

In 1926 the State Hospital Commission in its annual report preparatory to the new legislature referred to "the very inade-

quate facilities for caring for the insane in the district served by this institution (Pontiac)" and, figuring on a basis of population in this district of 1,800,000 (mind the figure! 2,154,124 was conservative for July 1st, 1926) and planning to provide beds for only 241.8 per 100,000 of population (a ratio which has been proved inadequate), concluded that facilities should be provided immediately for 4,352.4 insane in this district and recommended, in view of the probable growth of population in this district, that immediate authorization should be given to the enlargement of the present Pontiac State Hospital to care for 5,000 patients.

As a matter of fact, the Legislature of 1927 appropriated \$150,000 for some TEMPORARY patients' buildings (fire traps, if you please), and \$250,000 to toggle up an old power plant that has been pushed to its extreme limit for years. Again no tax clause was attached to provide any funds and again not a cent has been expended.

Present overcrowding in the mental hospitals I will dismiss summarily by saying that depending upon which of two sets of figures one chooses to accept, the six institutions for the insane today are overcrowded by either 819 or 1958 beds in excess of what they were built to accommodate.

Michigan needs today to raise its facilities for the care of the mentally sick to the level of that already available in the one section of the state that is caring for the demand made on it without too much overcrowding. To do this requires approximately 4,500 additional beds.

These beds require the erection of a new state hospital, strategically located, with a capacity of 2,500 beds and the addition of approximately 2,000 beds to existing institutions.

THE FEEBLEMINDED

Michigan provides at its state home for the feeble-minded at Lapeer approximately 2,900 beds. This is at the rate of 1 bed for every 1,581 of the general population of the state. There is a waiting list here of approximately 900. Wayne county at its two-year-old training school for the higher grade feeble-minded and borderline trainable child has admitted over 600 such children and has a population of 520 children.

There is greater variation in the number of beds provided by the various states for the feeble-minded than there is even for the insane, ranging from five states on January 1st, 1927, which provided no sep-

arate state institutional care for the feeble-minded to New Hampshire which in 1923 provided 88.1 beds per 100,000 general population.

No state as yet has reached the point where the number of beds it provides for the feeble-minded adequately meets the demand for admission or satisfies what is recognized as demanded by corollary social welfare programs. The demands of different states are different. The diagnosis of feeble-mindedness rests upon much more than intelligence quotient; the social constituents of the feeble-minded concept must not be overlooked, for the two main considerations the social capacity or incapacity is the more important. Consequently that small percentage of the entire feeble-minded group that requires institutionalization varies with the social standards of the state even more than in the case of the insane.

New York figures that it requires for its feeble-minded one bed in a state institution for every thousand people in the general population. It has not in the past and is not even today providing that number, but believes that if that number were provided the social acuteness of the feeble-minded problem would be met. It is now actually building to provide 10,000 beds for the feeble-minded, when it will have its one bed per 1,000 of general population.

North Carolina* has within the last two years completed a very satisfactory survey of its problem and after accepting the lower 2 per cent of the population as feeble-minded its commission remarks "that in an agricultural society or a mining population, industries which began with primitive people and to which there has been a very long period of time for racial adjustment, a larger per cent of feeble-minded would remain adjusted than would be the case in a cosmopolitan center where industries are of more recent origin, more complex, and require more thought. It may be also pointed out at this time that a native population should show a smaller per cent of feeble-minded than a foreign-born population. A population composed of a large per cent of immigrants is a population containing many who failed to adjust themselves to the conditions of their former country, and who naturally will find greater difficulty than natives in making the necessary adjustments to the condi-

* North Carolina is chosen specifically because at the time of this survey it was in a position quite the opposite of New York's position in that it was actually furnishing at that time only 11.6 beds per 100,000 population whereas New York was furnishing 67.9 beds per 100,000 population.

tions of their new country. To illustrate: North Carolina with an agricultural community and a native population should have a larger per cent of her feeble-minded population adjusted to its social environment than would likely be true of New York State with its large urban centers, its more complex conditions of life, and its large foreign-born population." North Carolina concludes from the reasons just stated that she requires not 1 bed for every 1,000 persons of her population but only at the rate of 0.7 beds per 1,000 general population.

Michigan has a high proportion of foreign-born. No state has more rapidly reversed its rural-urban population relationships. No state has more specialized industries of more recent origin. If there is any state with a diversified grouping of cosmopolitan centers where social adjustments, as well as industrial, are more complex and require more thought and quicker action than in our state where to express it symbolically we are required to dodge automobiles at a greater density per population than almost anywhere else in the world, I would like to know where it is.

We have not attempted to touch other elements in the problem of the social control of the feeble-minded problem.

Present facts show absolutely that any 0.7 beds for each 1,000 of population will not satisfy Michigan's demands. We already have 2,900 at Lapeer and a waiting list of 900 which with 500 at Northville means that nothing less than 1 bed in an institution for every 1,000 of general population will suffice.

Michigan then today requires 4,500 beds for its feeble-minded in institutions.

To summarize:

Michigan needs today the effective operation of a real program for mental health designed to elevate its facilities for the care and treatment of its mentally sick to whatever point is necessary to insure those advantages from earlier and freer hospitalization which experience has shown can be expected. It is impossible to conceive of this being at a rate lower than that of 1915 when it was at the rate of 285 beds per 100,000 of population.

Michigan needs today approximately 4,500 additional beds for the adequate care of its mentally sick citizens who are entitled to early modern hospital treatment. This can only be satisfactorily provided by a new state hospital of approximately 2,500 beds and the addition of 2,000 beds to existing institutions.

Michigan needs today an additional in-

stitution for the feeble-minded of approximately 2,500 beds. Perhaps in the emergency some of this present demand could be met by additions to the one existing state institution at Lapeer, but it is evident that this institution should not grow too big.

Michigan needs today a more modernized machinery to initiate a constant, virile, productive attack on the entire problem of mental hygiene as well as the present pressing problem of caring for the housing of the present insane and institutional feeble-minded; a more responsible central administrative machinery to see that we never get let down again into such a woeeful state as the present.

Michigan needs today absolute assurance that opinion-forming individuals in the far corners of the state shall see to it that the legislators who are to gather in Lansing on January 1st next shall be properly informed of conditions affecting the insane and the feeble-minded that the program of rehabilitation of state institutions which the governor has all ready to present on the opening day may secure immediate support.

Mind you, the problem is going to get a lot worse before it gets any better. It is hard to conceive of any material help before July 1st, 1930, if not January or later in 1931. Even this latter date assumes more than is justified from the past fifteen years of indifference and neglect.

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LOOSE CARTILAGES IN THE TEMPORO-MANDIBULAR ARTICULATION

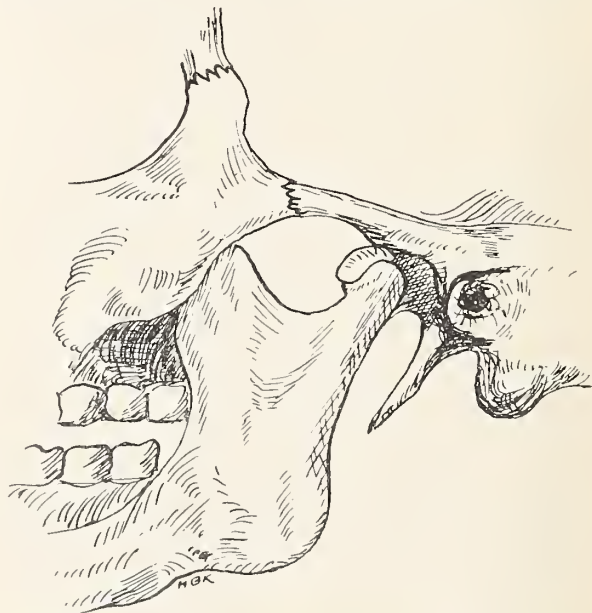
HARRY B. KNAPP, M. D., F. A. C. S.
BATTLE CREEK

That displacement of the menisci of the knee joint are of fairly common occurrence is well known. No other joint of the body, however, has attained the distinction of having its cartilages ruptured

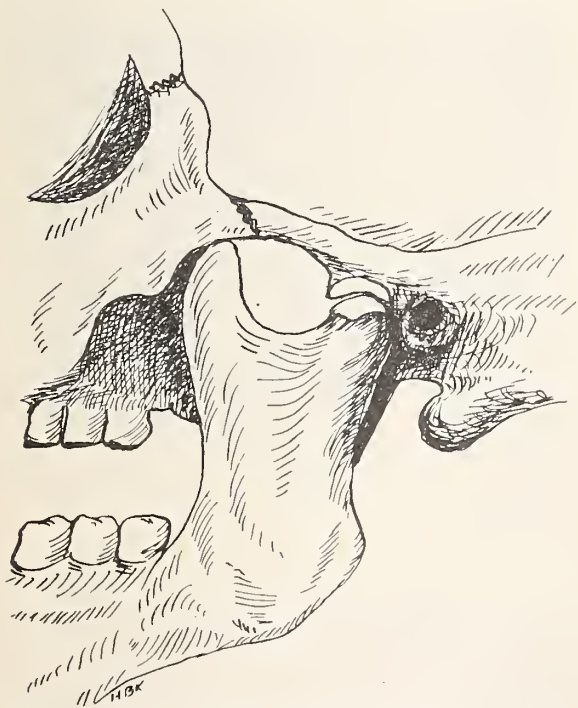
or displaced as frequently as the knee. That another joint than the knee can cause trouble from a loose cartilage is seen by the present report, but a search of the literature indicates that it is extremely rare. Ashurst, in the *Annals of Surgery*, 1921, page 761, reports a case of a young man who injured his elbow in a fall three years previously. There was persistent disability and inability to bend the elbow at times. An X-ray examination disclosed a loose cartilagenous body in the olecranon fossa. Operative removal gave complete relief. In a personal communication with Dr. M. S. Henderson, of the Mayo clinic, he stated that he had had one case of loose cartilage in the ankle joint. Ashurst also reports, *Annals of Surgery*, page 761, a case of unilateral subluxation of the mandible with excision of the inter-articular cartilage with complete recovery, and no recurrence of the trouble six months later.

J. Hogarth Pringle, in the *British Journal of Surgery* for January, 1919, reports a case of displaced disc of the temporomandibular articulation in a girl of 18,

excised, from the left joint the disc of cartilage which was loose. A report two years later showed complete recovery. In his article he also states that Annandale, in 1887, reported having operated two cases, and that Perthes, in the *Deutsche Chirurgie*, date not given, under the title, "Injuries and Diseases of the Jaw", writes of what appears to be the same condition, but



Illustrating the antro-posterior movement of the mandible. The condyle is resting on the eminencia articularis.



Illustrating the hinge motion or up and down movement of the mandible.

who, in May, 1910, complained of pain and a loud cracking noise in the left mandibular articulation which came on following the extraction of some teeth a few months previous. The jaw would become caught with the mouth wide open after yawning or sneezing, and after manipulation, would close with a snap. After a year of increasing annoyance from this trouble Pringle

no method of cure for this trouble is described.

Sir Astley Cooper in his "Treatise on Dislocations", page 393, says, "As in the knee, the thigh bone is sometimes thrown from the semi-lunar cartilages, so the jaw appears occasionally to quit the inter-articular cartilage of the temporal cavity, slipping before its edge and locking the joint with the mouth opened." Regarding the treatment he says, "Force for removing these appearances must be applied to give an opportunity for the cartilage to replace itself upon the rounded extremity of the condyle process."

It is difficult to be certain of the actual condition within the joint when the disc is displaced. The disc, when loosened, acts as a foreign body in the joint, and when it becomes caught, produces symptoms not unlike those of dislocation of the jaw, for which it is commonly mistaken.

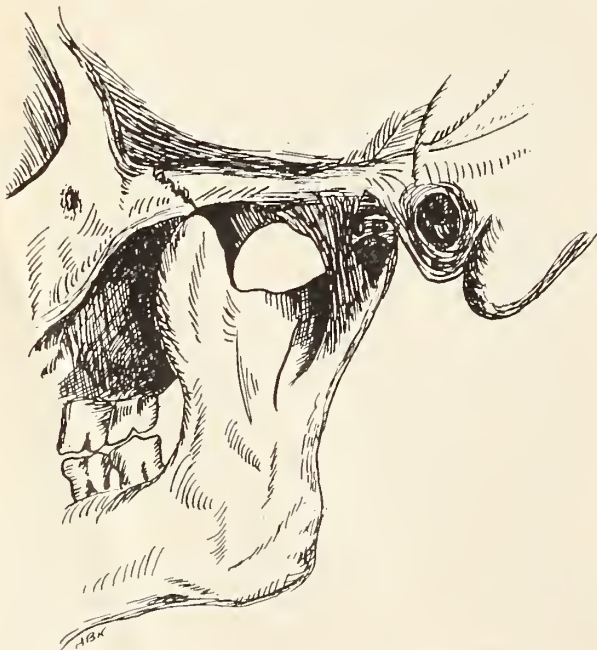
Blair, in his "Surgery of the Mouth and Jaws," page 152, states that it is not uncommon for the condyle to catch every time the mouth is opened widely, and to recede with a cracking sound. This, he thinks, in older people is due to arthritis, but in young persons, with lax ligaments,

to be due to either a subluxation or a catching of the meniscus. For treatment he recommends tonic measures and limiting the motion of the jaw until the ligaments regain a healthful tone.

ANATOMICAL CONSIDERATIONS

The meniscus of the mandible is dome-shaped, fitting with its convex surface into the sinuous articularis of the temporal bone. Its deeply concave under-surface is closely applied to the convexity of the condyle. It is thickest at the top of the dome and thins off at the edges and becomes lost in the fibrous tissues of the capsule of the joint. The disc divides the joint into two cavities, each having its own synovial membrane. In a normal joint the condyle and the meniscus move together in all positions of the joint with a gliding movement which takes place in the lower cavity.

The jaw has three principal motions, viz, a hinge motion between the condyle and the inter-articular cartilage, and an antero-posterior movement which takes place between the inter-articular cartilage and the eminentia articularis, the cartilage being carried forward with the mandible. The third movement is rotary in action,



A diagrammatic sketch of the left mandible, showing the capsular ligament opened up and disclosing two small cartilaginous bodies in the joint cavity.

which occurs in chewing. The condyle of one side remains in the glenoid cavity while that of the other rises on the articular eminence. A line passing from one condyle to the other represents the radius of rotation.

The ligaments which make up the capsule of this joint are the chief factors in limiting the movements of the jaw. They consist of the anterior, posterior, internal and external ligaments, which form the joint capsule. The anterior is weakest and readily ruptures in dislocations, which occur when the mouth has been widely opened and the condyle rides forward on the articular eminence. When dislocation takes place the condyle jumps forward with an extensive rotation on a transverse axis. Once out of its socket it is held by the spasm of the external pterygoid muscle as well as the temporal and masseter.

Derangements of the jaw most invariably follow a yawn, a sneeze, or a side blow on the jaw. A straight blow on the point of the chin, while capable of producing unconsciousness from concussion, almost never deranges the joint mechanism, or produces dislocation.

A lateral blow on the jaw while the mouth is open is likely to loosen the disc and makes way for trouble later on. A loosening of a part of the disc, by the breaking off of a small piece of the cartilage, or of a thin wedge of the cartilage, the so-called bucket-handle fracture, produces a condition which disturbs the joint function and allows the loosened cartilage to intervene in the hinge of the joint between the movable condyle and the glenoid fossa of the temporal bone. With the cartilage caught, the mouth is prevented from closing and there is a sharp sudden pain on the affected side. Trauma of the synovial lining of the joint results in a synovitis with a stretching of the capsular ligaments, similar to that seen in the knee when it assumes this role. The external swelling and tenderness are about the only objective signs which appear as sequelae.

CASE REPORT

On January 5, 1928, was called to see a girl of 18, who, while yawning, apparently dislocated her jaw on the right side. The mouth was locked wide open, and there was excruciating pain in the right side of the face. While attempting the usual procedure for reducing a dislocated jaw the joint unlocked with a snap and the patient was relieved. Following this the temporo-mandibular joint was swollen and tender. The next day the jaw again became fixed with the mouth wide open, and from this time on it became a daily occurrence whenever she would talk, laugh, or yawn, or while eating. The patient learned to unlock the jaw quite readily, but in two or three months it became a matter of reducing it as many as 30 or 40 times a day. The painfulness of the condition varied inversely with the frequency.

An attempt was made to obtain relief by wiring

the teeth together, and for six weeks this was tried. The relief was only temporary. An X-ray was taken of the jaw both in the normal position and with the jaw locked in the fixed position (see plates I and II) which did not show any change in the location of the condyle from its place in the glenoid fossa.

This annoying condition led to the belief that only surgical measures would give relief and this was undertaken with no very definite idea of what was to be done. A relaxed capsular ligament

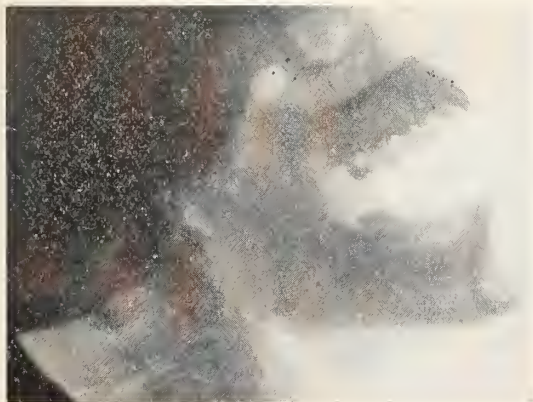


Plate I

Radiograph print of jaw showing mouth locked open with condyle in normal position in glenoid fossa.

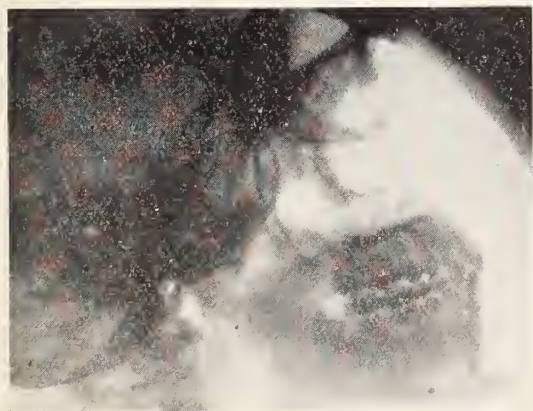


Plate II

Radiograph print of jaw replaced, mouth closed in normal position.

seemed to be the most likely condition needing correction.

Operation—Under ether, an incision was made over the right temporo-mandibular joint extending upward and forward over the zygoma. The capsule of the joint was exposed, but it could not be demonstrated to be relaxed, and any manipulation of the jaw did not reproduce the locking. An incision, however, through the joint capsule readily disclosed the cause of the trouble. Two small pieces of cartilage presented themselves in the joint, and were attached by a thin fibrous pedicle. They were snipped off, and as no others could be found, the capsule was closed with No. 1 chromic catgut. The wound was closed and healed promptly. After ten days the bandages were removed and the patient was allowed to use her jaw. No further trouble has been experienced, and the result is all that could be desired.

BLADDER WOUNDS—A REPORT OF ELEVEN CASES

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DETROIT, MICHIGAN

The relatively large number of bladder injuries seen during our recent service at the Detroit Receiving Hospital has made me wonder whether prohibition, the automobile and the crime epidemic in our modern cities are not increasing these serious injuries, and has prompted me to review them at this time and call attention to some of the chief points in diagnosis and treatment.

No attempt is made to present anything especially new on the subject, but these cases all emphasize certain features that have a very important bearing in the treatment of bladder wounds.

Though Homer, in the *Iliad* refers twice to this accident as being rapidly fatal, and Hippocrates, Aristotle and Galen recorded similar conditions, a search into the literature will attest to the rarity of these injuries. In Hagnar's¹ contribution to the subject of bladder injuries, he calls attention to the fact that taken collectively they are rare in surgical practice and though much is written on the subject, it is probably due to the seriousness that the older surgeons attached to this injury when the intraperitoneal varieties at least were believed to always terminate fatally. Evans and Fowler², whose statistical study of these cases may be looked upon as standard, state that among 10,867 surgical cases treated in the Bethany Hospital in eight years there were only three cases of bladder injury, while only two such cases occurred among the 16,711 surgical cases admitted to Bartholomew's Hospital in 25 years.

The bladder, owing to its location is peculiarly immune from direct or indirect violence and it is generally agreed that, excepting the violence done by cystoscopes, lithotrites or during operative procedures, the bladder is but little liable to injury except when overdistended. In the 408,672 surgical cases reported in the Civil War, not a single case of incised, punctured or lacerated wound of the bladder was reported, and there were only 183 of bullet wounds of the bladder. Even in the fierce hand-to-hand fighting on the battlefield the bladder escaped injury.

During the World War wounds of the bladder were very frequent. The Medical Department of the United States Army reports about 0.08% during 1917-18³, while

other French, English, German and American surgeons report about the same per cent in their records. Indeed, as Hagnar¹ says, the history of surgical treatment of bladder injuries reflects in a very convincing manner the highly progressive stage which modern surgery has attained in the care of these conditions. It is significant to note that Bartel's⁴ report of 131 intraperitoneal bladder wounds all terminated fatally except Walther's case in which he did not suture the peritoneal wound and which marked the turning point in the treatment of bladder injuries.

PREDISPOSING ETIOLOGY

In all forms of bladder injuries whether intra or extraperitoneal, the over-distended bladder is the most vulnerable, though the empty bladder is not immune. The exciting causes are: Falls, blows, crushing injuries with or without fracture of the pelvis. The patient is frequently intoxicated, which predisposes to rupture by causing the bladder to fill rapidly, decreases the sensibility and facilitates the injury. Bladder ruptures are more frequently intraperitoneal caused generally by a blow over the hypogastrium, bursting the bladder much in the same manner as a paper bag bursts from a blow. Peritonitis is almost inevitable after intraperitoneal rupture, and if the urine is infected, it manifests its symptoms immediately. If not, the peritonitis may be delayed several days, or may even fail to appear altogether, especially if the amount of urine extravasated is small.

Attempts at securing reliable histories are, as a rule not successful, as these patients are either intoxicated or in shock when first seen, hence close attention must be given to all signs that they may be interpreted intelligently.

SYMPTOMS AND DIAGNOSIS

While the symptoms and diagnostic features of wounds of the bladder are in many respects the same as those of rupture of the bladder, there are certain features associated with wounds of this organ which make it advisable to consider the symptomatology of the two conditions separately. In all cases of injury in the vicinity of the bladder the most important questions to be settled as soon as possible are the following two:

1. Is the bladder itself involved by the injury?
2. Is the injury intraperitoneal or extraperitoneal?

After the receipt of an injury which causes a wound of the bladder, the patient usually experiences a more or less pronounced degree of shock. Pain in the lower abdominal region may be very severe. Excessive desire to void urine, but inability to do so is a very frequent symptom. A symptom especially emphasized by Wichmann⁵ is namely, the absolute helplessness of the patient with inability to walk. This helplessness may reach the stage of complete collapse. Blood may be mixed with the urine and seen escaping from the external wounds in varying quantities, the escape of urine becoming clear only after a day or two. Usually the wound channel can be readily followed by a probe for varying degrees of depth, even into the bladder, which thoroughly establishes the diagnosis. If the injury was received in a full and distended bladder which collapses following the escape of the urine through either natural or unnatural channels the diagnosis and objective signs are more difficult to recognize. The symptoms of a classical case of bladder rupture have been well summarized by Besley⁶ as follows:

1. At the time of injury there is immediate severe pain in the abdomen, sometimes a distinct sense of something tearing or giving away. This is described by the patient as being in the lower part of the abdomen, or occasionally referred to the region of the heart. The severe pain felt at the onset is usually continuous. Marked symptoms and signs of collapse are quite constantly found.

2. The patient is unable to walk or walks with great difficulty.

3. One of the most important and constantly present symptoms is the strong desire accompanied with the inability to void urine. A few drops of blood or bloody urine usually pass from the urethra. Not infrequently, however, the patients are able to void urine in either an extraperitoneal or intraperitoneal rupture. Bloody urine was a marked sign in every case of this report.

4. The subsequent course of the disease and the symptoms depend upon the location of the rupture and the direction of the extravasation. If the tear is intraperitoneal, the course will be that of a peritonitis with obstipation, vomiting, and high pulse and temperature. It must be borne in mind that the temperature curve is only one item and the presence or absence of fever is not absolutely diagnostic for or against peritonitis. When the rup-

ture is extraperitoneal the symptoms are those due to an extravasation of urine into the tissues, giving rise to the absorption of the poisonous properties of the urine and the toxins of the accompanying sup-puration. The symptoms are those of sepsis with chills, high pulse, irregular temperature curves, headache, and gas-trointestinal disturbance.

DIAGNOSIS

Injury to the bladder may be suspected when a patient has received a contusion of the hypogastrium, fracture of the pel-vis, bullet wounds of this region or through the buttocks, and thereafter either passes bloody urine or no urine at all; when a patient in alcoholic stupor shows undue rigidity and tenderness about the hypogastrium and catheterism draws no urine or bloody urine; when a patient known to suffer from a grave bladder lesion complains of sudden, severe hypo-gastric pain, thereafter strives in vain to urinate.

PALPATION

Palpation of the hypogastrium at the onset reveals rigidity and tenderness. Later the space of Retzius may be filled by a doughy sensitive infiltrate (extraperi-toneal rupture), or the rigidity and tender-ness may extend to the whole abdomen (intraperitoneal rupture). If the rupture

is extraperitoneal, rectal palpation may re-veal tenderness and infiltration.

CATHETERIZATION

The catheter usually withdraws a little bloody urine. If catheterism is impossible because of ruptured urethra, immediate perineal section should be performed. The test which has been used by some authors of filling the bladder and measuring imme-diately the return flow, has been found by us to be misleading because in some in-juries the wound in the bladder may be quite small and the leakage slow, or the catheter may be pusted through the blad-der wound into the peritoneum. Injection tests of air have been condemned by Keyes as a misleading diagnostic feature, as he has found it to suggest rupture of the bladder when none existed.

CYSTOSCOPY

Cystoscopy should always be resorted to if there is any doubt as to the diagnosis. The objection to cystoscopy that it results in injection of the solution used to fill the bladder into the peritoneum or the pelvic cellular tissue need not be considered. If the bladder is actually ruptured, it must be operated upon immediately in any case and the dilution of the urine that has al-ready escaped with a little sterile fluid can do no harm.

Case No. and cause of injury	Type of blad-der injury	Complicating injuries	Pre-operative delay	Procedure	Result	Remarks
No. 1 Bullet wound	Intra-peritoneal	Nine perfora-tions of ileum	Four hours	Bladder sutured, suprapubic drain	Death	
No. 2 Bullet wound	Intra-peritoneal	Perforations of small intestines	Three hours	Original wound sutured, Pezzar drainage	Recovery	
No. 3 Bullet wound	Extra-peritoneal	Perforation of rectum	Four hours	Bladder closed; suprapubic drain four days later	Recovery urinary and fecal fistulae	
No. 4 Kicked over pubic region	Extra-peritoneal	Fractured pelvis	Thirty hours	Wound not sutured, Pezzar drainage only	Recovery	
No. 5 Auto accident	Intra-peritoneal	Fractured femur (com-pound)	Twenty-two hours	Bladder closed; Pezzar drainage	Death	
No. 6 Auto accident	Extra-peritoneal	Fractured pelvis	Thirty hours	Bladder packed; suprapubic drain	Death	
No. 7 Auto accident	Extra-peritoneal	Fractured pelvis	Two weeks	In no condition for surgery	Death	
No. 8 Elevator accident		Fractured pelvis	Four hours	Bladder closed; Pezzar drainage	Death	
No. 9 Unknown, probably instru-mental	Intra-peritoneal	None	?	Bladder closed; Pezzar drainage	Death	
No. 10 Bladder incised during herniotomy	Extra-peritoneal	None	Twenty-four hours	Bladder closed; Pezzar drainage	Recovery	
No. 11 Fall	Intra-peritoneal	None	Four days	No operation	Death	Injection of bladder with fluid and return amount about the same, test was misleading

EXPLORATORY OPERATION

If there is any doubt, the abdomen should be opened in the median line and the tissues inspected about the bladder. If no evidence of bladder wound is found extraperitoneally, the peritoneum should then be opened.

TREATMENT

When the diagnosis is established, there is no other treatment than immediate operation; when it is in doubt, an exploratory operation affords the quickest and surest means of reaching a conclusion that must be reached quickly if at all. The only contraindications to operation are shock and grave visceral injury, and if an infusion of salt solution improves the general condition, the operation should be performed even in shock.

PROGNOSIS

Among Mitchell's 90 cases of extraperitoneal rupture of the bladder 37 were operated upon and 24 of these died (64.9%), while of the 53 treated expectantly, 51 died (96.2%). Sieur collected 34 cases of intraperitoneal rupture, all of which were operated upon and showed a mortality of 58.8%. Without operation practically all would have died. All statistics encourage early operation so markedly as to call for no comment. Doubtless the relatively low operative mortality of intraperitoneal, 58.8%, as compared to extraperitoneal rupture, 64.9%, may be due to the fact that the immediate gravity of the peritoneal cases enforces early operation, while the slower progress of extraperitoneal ruptures encourages ill-advised delay.

CASES

Of our group of cases the following records emphasize most of the salient facts:

Case No. 1, Detroit Receiving Hospital No. E 1259—White, male, age 30, admitted 4 p. m. January 31, 1927. While attempting a hold-up he was shot through the back by an officer.

Physical examination—He was a well developed and nourished male who was in shock. The heart sounds were weak, rapid, and of poor quality, the remainder of the examination was negative to the abdomen, which was rigid and tender, especially over the right quadrants. Free fluid could be demonstrated in the lower abdomen. There was a gunshot wound in the back over the left sacral region. The reflexes were sluggish and the patient admitted that he was addicted to the use of morphine.

The urine obtained per catheter was bright red and the microscope showed this to be due to red blood cells; it was acid in reaction.

The patient was taken to the operating room immediately and under ether anesthesia an incision was made just about the symphysis pubis

extending upward about $1\frac{1}{2}$ inches. The bladder was explored and found to contain two holes, the result of a through and through gunshot wound. These holes were closed with three purse-string sutures of No. 0 chromic catgut. A mushroom catheter was inserted into the opening, which was just at the line of incision. The incision was then closed with a drain in the space of Retzius. A right rectus incision revealed nine perforations in the ileum.

The condition of the patient was never good and he died at 6:40 a. m., February 2, 1927, after every known method of stimulation failed.

Even though operative interference followed very shortly, there was too much damage to the intestines. This case illustrates a point made by Fullerton, who says that gunshot wounds of the buttock must be regarded with utmost suspicion as an intraperitoneal wound of the bladder. Intraperitoneal wounds of the bladder are nearly always associated with other intraperitoneal injuries.

Case No. 2, Detroit Receiving Hospital No. E 343—A white male, age 42, who had been shot in the right buttock, was admitted at 3:00 a. m., January 9, 1927.

Physical examination—Was normal to the abdomen, which was tender and rigid throughout, but more marked in the lower quadrants. There was a palpable mass in the right lower quadrant.

A three-inch right rectus incision down from the umbilicus revealed the abdomen to be filled with a bloody fluid. There was a loop of small bowel found to be adherent to the bladder, which, when removed, showed a rent in the bladder wall about one-half inch long. This, as well as the rent in the bowel, was repaired and a mushroom catheter was inserted through a new opening in the bladder and the abdomen closed in layers.

Recovery was uneventful.

This case again illustrates the frequency of bladder wounds in connection with gunshot wounds of the buttock.

Prompt diagnosis and treatment in this case saved a life.

Case No. 3, Detroit Receiving Hospital No. D 10542—A colored male, age 37, admitted to the hospital at 5:30 p. m., September 4, 1926, following a gunshot wound.

The wound of entrance was in the L. L. Q. three F. B. above the inguinal ligament and three or four F. B. to the left of the mid-line. The wound of exit was in the right buttock on a level with, and just lateral to the ischial tuberosity. He was not in shock, his pulse and temperature was not elevated. His abdomen was not especially tender and there was no rigidity of the recti muscles; however, there seemed to be some bulging of the flanks and a shifting area of dullness.

An exploratory laparotomy with a three-inch right rectus incision revealed no intraperitoneal perforation, but a marked hematoma was noted. When the space of Retzius was explored a large amount of urine escaped. The peritoneum was closed without drain, but a cigarette drain was placed in the space of Retzius and the patient was put to bed. There was a free drainage of blood from the wound in the buttock, and of urine from the cigarette drain.

September 8, 1927, a suprapubic cystotomy was performed and perforations were found in the right posterior wall of the bladder which could not be sutured and as it was impossible to pass a sound through the urethra a Pezzar catheter was fastened in the bladder for drainage.

After a stormy convalescence with the development of a fecal as well as a urinary fistula, the patient was finally discharged to the out-patient department, December 20, 1927, where urethral dilatation was continued.

This case is another illustration of the frequency of bladder injury in gunshot wounds of the buttock.

Case No. 4, Detroit Receiving Hospital No. E 998—A white male, age 36, intoxicated, was admitted to the psychopathic ward at 6:00 a. m., January 25, 1927. The following morning he complained of pain in the lower abdomen, and said that he had been kicked there by his wife the previous day. The patient said that the pain had subsided some. There had been no stool since admission and he had vomited a sour-smelling material twice.

Physical examination was negative as to the abdomen, which was flat, with the exception of an erythematous area in the lower quadrants, especially the right, which resembled the erythema produced by the long continued application of heat. There was some tenderness throughout the entire abdomen, but much more marked in the lower quadrants, the maximum tenderness being in the right. The erythematous area, the borders of which were slowly advancing, was boggy to palpation. The scrotum on the right was slightly enlarged and seemed to contain some fluid. His temperature was 100.8, pulse 120 and irregular. At 1:00 p. m., a catheter revealed a dark bloody urine containing some clots.

Under anesthesia we passed a catheter and found a moderate amount of urine containing a few shreds of clotted blood. When the bladder was filled with sterile water we could recover as much as was instilled. In spite of this fact a suprapubic incision was made which showed the tissues of the abdominal wall and the space of Retzius to be saturated with urine. However, no rent could be found in the bladder wall from the exterior, so it was then opened. Digital examination revealed a small break in the mucosa of the vesical neck, also a separation of the symphysis pubes, and what seemed to be a fracture of the right ramus of the pubis. Because of the small size of the rent we considered that drainage would be sufficient, so cigarette drains were placed in the space of Retzius and a Pezzar catheter fastened in the bladder.

Recovery was uneventful.

This case illustrates three important points:

First, incision to explore the suprapubic region, as recommended by Alexander, i. e., incision through the suprapubic region into the space of Retzius and exploration of the prevesical space should be done. If no extraperitoneal wound is found, then open the peritoneum and look for intraperitoneal injury.

Second, that the test used by some of filling the bladder and measuring the return flow is misleading. Here we were able

to recover as much fluid as we instilled into the bladder.

Third, it is not necessary to suture a small extraperitoneal wound if drainage by a tube is effected.

Cast No. 5, Detroit Receiving Hospital No. D 15167—A colored female, age 26, married, admitted 10 p. m., December 25, 1926, after being struck by an automobile. She has had one normal delivery.

A compound fracture of the right femur was given support in a Thomas splint and she was put to bed. She complained of pain throughout the entire abdomen and nausea, but no vomiting. This pain became more severe, the abdominal wall more tender and quite rigid, especially in the right lower quadrant. Nothing was given by mouth because of suspected internal injuries. Until the time that she was referred to our service, some 20 hours after admission, had not voided, nor had any urine been obtained by catheter. When we saw her she was in much pain, the abdomen was moderately distended and tender. There was some rigidity, but no evidence of fluid could be elicited. At this time her pulse was 80, temperature 98.6, W. B. C., 14,800, with 80 per cent of Polys., and 12 per cent Monos.

At 8:30 p. m. under gas-ether anesthesia, a four-inch incision was made below the umbilicus, and the peritoneal cavity found to contain a large amount of urine, which had escaped from a rent found in the superior surface of the bladder. This was closed and a Pezzar catheter was placed in the urethra, also drains in the peritoneal cavity.

The patient lingered for several weeks, but finally died of septicemia, to which an osteomyelitis of the femur was a very large contributor.

Case No. 6, Detroit Receiving Hospital, No. F. 3260—This patient, a male, age 27, was admitted March 12, 1928, at 12:15 p. m., following the collision of an automobile and street car. He was in a semi-conscious condition.

His past history was negative.

Physical examination was as follows: There was a contusion over the left temporal region. Pupils equal and regular and they reacted to light and accommodation.

Abdomen: There was a contusion over the left posterior superior iliac spine. There was marked tenderness over the left pelvis, as well as over the lower lumbar and sacral vertebra. The point of greatest tenderness was over the left superior spine of the pubis.

X-Ray—Skull: Linear fracture of the left temporal region. Pelvis: Fracture of the left pubis and ischium with the fragments in good position. Lower spine: Longitudinal fracture of the left half of the sacrum with no displacement.

Laboratory: Wassermann was negative. Urine was bright red with blood.

Because of the X-ray findings of a fractured pelvis, and a general distention of the abdomen, it was suspected that the patient had a bladder rupture. The patient, however, was able to void, and when the catheter was introduced, without difficulty into the bladder, about 16 oz. of bloody urine was withdrawn. A cystoscopy was done and both ureters were catheterized. There was no evidence of bleeding from the kidneys. A wound was found in the dome of the bladder. A suprapubic incision was immediately made, and upon retraction of the rectus muscles a gush of bloody urine followed. A large rent was found in the

bladder. There was a large clot of blood, which plugged the opening in the bladder. This probably accounts for the fact that the bladder was able to retain the large amount of fluid. Because of the free hemorrhage deep in the wound it was deemed advisable to pack, rather than to suture the bladder around the tube. Two large packs were introduced, and the wound was drawn together with silkworm sutures through the rectus muscle and skin.

The patient was able to void small amounts at all times before and after operation, in spite of the fact that there was a pack in the bladder.

At no time while under our care was the patient's condition good.

He died April 12, 1928.

This case especially illustrates the value of the cystoscope in the diagnosis of ruptured bladder. There were several of the staff who suspected that the bleeding was coming from the kidney and that the bladder was not injured. That is the reason why he was not referred to our service sooner.

In this case again we have an example of the misleading conclusions that could have been drawn by ascertaining the ability of the bladder to hold a fluid.

It is interesting to note that this patient was able to void at all times, even though the amount was not great, a symptom that is usually considered as pathognomonic, i. e. inability to void.

Case No. 7, Detroit Receiving Hospital No. E, 579—A colored male, age 39, admitted to the hospital January 14, 1927, said that while riding in a truck he fell off and was run over by the truck.

Physical examination—He was in shock, there was considerable bleeding from a perineal wound which extended into the rectum. This bleeding was controlled and he was put to bed.

There was some distention of the abdomen, but no rigidity. There was pain on deep palpation over the right pubes and inguinal region.

X-ray showed the pelvis to be fractured in several places, as well as a fracture of both bones of the right leg.

On January 23, 1927, he developed an incontinence of urine.

He was referred to our service on January 28, at which time his condition was very poor and it was thought unwise to interfere surgically. An indwelling catheter was inserted and he was put on urotropin and sodium acid phosphate.

He expired suddenly January 31, 1927.

This patient was seen too late for operative interference.

Case No. 9, Detroit Receiving Hospital No. E, 80—This patient, an elderly white male, was admitted to the hospital at 6:30 p. m. January 2, 1927, with the complaint that he could not pass his water. He could not speak English, but with the aid of an interpreter it was found that he had never had a retention before and that he had never had hematuria, but that he had been having nocturia for the past five years. There was no history of injury.

Physical examination revealed an adult male who was over weight. The chest was emphysema-

tous. The heart was slow and irregular, the tones poor and indistinct, but there were no murmurs or increased areas of dullness. The abdomen was tense and rigid with dullness over the pubes, extending up to the umbilicus, and tender throughout.

Genitalia: Negative, save for a phimosis.

Rectal Examination: Prostate was enlarged.

Blood Pressure: 142/84.

Blood Chemistry: Dextrose, 124 mg. per 100 c.c. N. P. N., 62.7, Urea, 63.9, Creatinin, 2.2. Blood count, W. B. C., 16,100, with 80 per cent polys.

Attempts to catheterize the bladder were reported to be unsuccessful and that even a filiform could not be passed beyond the bulbo membranous junction. However, we were able to pass a Coude catheter after the use of a local anesthetic in the urethra and obtained a very small amount of bloody urine. Because of this and due to the fact that the distention was increasing, a diagnosis of rupture of the bladder was made and the patient was taken to the operating room at 10:50 p. m., January 3, 1927. A three and one-half inch incision from the symphysis up the midline was made. On opening the deep fascia and splitting the rectus muscle, urine gushed into the operative field. This apparently was coming from the presenting viscus, which was of a very dark color, the vessels standing out markedly. Further examination proved this to be a thickened peritoneum. Farther search revealed the bladder to be low in the pelvis behind the symphysis with a large rent in the anterior surface. A Pezzar catheter was placed in the bladder in a retrograde manner through the urethra, and drains were placed in the peritoneal cavity and space of Retzius.

A very stormy time followed and after developing a marked distention the patient's temperature suddenly rose to 105. He died at 8:30 a. m., January 7, 1927.

We believe that the cystoscope would have been of considerable value in assisting us to make an earlier diagnosis in this case. Because of our inability to secure the patient's best co-operation it is impossible to be sure of the cause of injury in this case, but we suspect that the injury followed a previous attempt at instrumentation.

CONCLUSIONS

1. Bladder wounds and injuries are on the increase and should always be kept in mind.

2. It is not safe to draw conclusions from the amount of fluid returned after injecting a known volume into the bladder.

3. Whenever possible, the cystoscope should be used.

4. When in doubt an exploratory operation should be performed.

5. In doubtful cases the suggestion of Alexander to first rule out extraperitoneal wounds by carefully exploring the pre-vesical space before opening the peritoneum is, I think, a good one.

6. When the diagnosis has been made operative interference must be prompt.

7. Too much time should not be spent trying to repair inaccessible wounds for, with good suprapubic drainage those wounds will heal.

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OBSERVATIONS ON LUPUS ERYTHEMATOSUS

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In the domain of dermatology three dermatoses have principally engaged the attention of clinicians and dermatologists on account of their refractoriness toward therapeutic intervention and their etiologic uncertainty; viz., psoriasis, pemphigus and lupus erythematosus. The latter has received more consideration and has been studied with greater care than the former on account of its disputed relationship with the tuberculodermata, upon which we intend to dwell elsewhere in this article. The purpose of this essay is to give in a limited scope, a succinct resume of our knowledge of lupus erythematosus in its various aspects, with special reference to its etiology and therapy.

In defining lupus erythematosus, one is confronted with a deplorable lack of uniformity in the classification of cutaneous diseases. There is such a diversity of opinion, so much of the personal injected, that no two classifications agree. Some authorities relegate it to the domain of inflammations, while others insist it should belong to the hypertrophies. Therefore, in defining this disease, one is unwilling to accept its nomenclature, let alone the classification to which it belongs. But lupus erythematosus is such a time-honored and traditional designation, that one hesitates to change it; still Unna has so appropriately and clinically named it, that anything else seems rather meager and inadequate. His terminology for this

dermatosis is *ulerythema centrifugum* from "oule," scar, since erythema, superficial cicatrization and centrifugal extension are its most significant characteristics. Moreover, the term lupus leads to confusion with tuberculosis, which is, as yet, a debated question. We plead for this more descriptive designation and trust that the Congress of Dermatology, at its next meeting, may adopt it.

The definition of this disease should therefore be based upon Unna's descriptive and classical terminology, i.e.: A cutaneous disease characterized by erythematous areas, covered with grayish-white scales, terminating in scar formation without preceding ulceration, and characterized by centrifugal extension.

According to the literature examined by us, it would seem that lupus erythematosus constitutes about .31% of all dermatological cases, although Hazen gives a larger figure, bringing it up to .33%; thus it is not such a very rare cutaneous affection as some authorities would regard it. Very often it is not readily recognized, especially in its incipient stage, when the pathognomonic signs are not so readily discernible as during its progressive course.

ETIOLOGY

Lupus erythematosus—of which there are two types: (1) chronic and localized, and (2) disseminated—is an inflammatory disease of probably toxic origin.

Chronic localized or fixed type. This is the more common form of the two. It occurs in both sexes, but is perhaps five times more frequent in the female than in the male. In about 40% of the cases the disease begins in the third and fourth decades. In about 25% it occurs between the ages of 20 and 30, and in about 20% it occurs between the ages of 30 and 40. While rare in children, it has been diagnosed as early as the fifth year. It is exceedingly rare for two members of the same family to be affected. A history of tuberculosis in the family is quite often elicited. Evidence of tuberculous infection is present in at least one out of every five patients having this disease—usually in the form of cervical or bronchial adenopathy, scars of abscesses or bone and joint affections; but pulmonary tuberculosis or extreme loss of weight are rarely found.

The etiologic factor of tuberculosis, however, is still a mooted question and there is considerable diversity of opinion as to the exact relationship of the localized type of lupus erythematosus to tubercu-

losis. Some believe it to be a tuberculous exanthem, and this view is somewhat supported by the production of tuberculosis in guinea pigs by the inoculation of material obtained from patients. This has been successfully accomplished by Gougerot. On the other hand, it is particularly and exceedingly rare to obtain a positive reaction with tuberculin injected into the patient, although in some of our patients the reaction was positive. Calmette's ophthalmic test gave a *positive* reaction in fourteen cases out of a series of twenty. In none of these patients, however, could there be found any clinical evidence of tuberculosis either in the viscera or elsewhere. For the present it seems best to look upon lupus erythematosus of the fixed type as *toxic*, or that a tuberculous toxin may be one of the causes.

More recently Barber and others have brought forward the view that lupus erythematosus is caused by focal infection by the streptococcus hemolyticus, the foci being in the roots of the teeth, in the tonsillar crypts, nasal sinuses, the prostate or intestines. Streptococcal infection may, therefore, be included as a possible cause of lupus erythematosus. Dyson reports that some types of this disease react locally to a tuberculin ointment and that others react to a streptococcus ointment. The etiology is therefore obscure; and it may prove, as Gray suggests, that lupus erythematosus is due to a specific organism, which is favored by certain pre-existing conditions, of which tuberculosis is one.

DISSEMINATED LUPUS ERYTHEMATOSUS

This form occurs usually in females; it is rarely seen in males. It chiefly affects young women between the ages of 14 and 30. In over 60% of the cases there is clinical evidence of tuberculosis, i.e. affection of the glands, scars of abscesses, loss of weight or pulmonary tuberculosis. It is usually thought that this type of lupus erythematosus is an exanthem, and there is some evidence in support of this view. There are some cases, however, in which tuberculosis seems to be definitely excluded. The family history is positive for tuberculosis in about 80%. In many cases no exciting causes can be determined, but there are many instances on record in which the eruption started apparently as the result of mental or psychic trauma. The possibility of the non-tubercular origin of some cases must not be overlooked. Streptococci have been found in the blood in some cases, but this is not

uncommon in other forms of grave illness or in the moribund.

PATHOLOGY

Lupus erythematosus is a peculiar form of inflammation of the skin—the inflammatory process beginning in the vascular layer about the sebaceous and coil glands, and sometimes around the follicular orifices. There is a hyperemia of the corium and, later, cellular infiltration about the vessels. The infiltration consists of round cells, mast cells, plasma cells, and, rarely, giant cells. Lymph channels traversing the cellular infiltrate are frequently observed. Finally the infiltration undergoes cicatrization, which leads to the destruction of the glandular elements of the skin, including the hair follicles. The tubercle bacillus has never been detected in the tissue.

SYMPTOMATOLOGY

In considering the symptomatology we must bear in mind two distinct varieties of this affection: the *acute* and the *chronic*. The former is usually widely disseminated, while the latter is zonal or focal in character, i.e., invading small portions of the skin or merely localizing itself to one single area. The acute or generalized variety is rarely met with an usually terminates fatally. There is another sub-variety, termed the *telangiectatic*, with no apparent cutaneous disturbances, save an intense erythema or reddening of the skin accompanied by dilatation of the capillaries. When the erythema has subsided, a distinct white scar is left. Whether this is really a type of lupus erythematosus or a distinct entity per se, dermatologists are still at variance. In all these types there are no marked subjective disturbances; occasionally a patient will complain of slight burning or tingling sensations, but in the vast majority of cases there is very little discomfort.

The clinical forms in which lupus erythematosus commonly appear are the *erythematous* and the *discoïd*; the latter is also sometimes called the *scaly* form. Both of these may appear simultaneously or else the disease may consist solely of one form.

The *erythematous* type manifests itself in the appearance of more or less concentric lesions, that are somewhat raised above the surface of the skin and erythematous in nature. Their concentricity and centrifugal extension remind one of tinea circinata, to which they bear a striking resemblance, owing to the lesions tending to flatten in the center. Their elevated

borders exhibit a peculiar redundancy, which gives one the impression of "stippling". After existing for months, they gradually disappear leaving behind superficial atrophy or scarring.

The erythematous form attacks preferably the hands and fingers. In one of our cases the palms and the fingers were actually studded with erythematous-scaly lesions. Concomitant with this case there were also discoid or scaly lesions on the elbows, ears, cheeks and nose, and the batwing or butterfly appearance so characteristic of lupus erythematosus. The nails in this case also showed involvement in the form of corrugations, fissuring and extreme brittleness.

The *scaly* form appears on the ears, face and scalp. The butterfly configuration mentioned above is quite frequently seen, spreading over the bridge of the nose and extending along both cheeks. The lesions are symmetrical, perhaps ten or twelve patches may be observed all along the face in any given case.

The *genesis* of the disease is interesting, if one discovers a case in its incipency. The first advent of the disease may appear in the form of papules; they soon become squamous and spread peripherally, forming concentric lesions that terminate in atrophic scars. The latter are not very marked; they are rather superficial and *au niveau* with the skin. As the edges advance the follicular orifices enlarge, become distended and the scales dip or sink into it and are removable with some difficulty. The scales are closely attached to the skin and generally whitish in color, although at times they may assume a grayish-tan hue. The dermatosis spreads very slowly and after existing for months the lesions gradually disappear by slow involution.

DIAGNOSIS

If the cardinal points be kept in mind there can be little doubt as to the diagnosis. They can be summed up as follows:

(1) The characteristic location of lupus erythematosus, i.e., appearing on the nose and cheeks, ears and scalp and its butterfly or batwing form when it is localized to the former areas. (2) Its frequent symmetry. (3) The closely adherent whitish-gray scales and the dilated follicular orifices. (4) The "stippling" appearance which the margin of the lesion suggests. (5) The production of atrophic scars without preceding ulceration. (6) Its incidence in adolescence and the absence of tubercle bacilli in the lesions: All these

diagnostic factors sharply differentiate it from lupus vulgaris, which is *primarily* and *distinctly* of tuberculous origin.

It must be differentiated from *sypphilis*, especially of the nodular type, which also produces scars without ulcerations; but in lues there are no dilated follicular orifices and its progress is more rapid; furthermore, the scales are not so closely attached and its localization and distribution are entirely different from that of lupus erythematosus. Moreover, a serological examination will aid in corroborating the diagnosis. *Psoriasis* could never be mistaken for lupus erythematosus if one bear in mind the classical picture of such a dermatosis—its mother-of-pearl scales, the bleeding points and the peculiar distribution. *Psoriasis* never terminates in atrophic scars. Of course, in all cases of doubt one should have recourse to biopsy. It is advisable to do a Von Pirquet or an intradermal tuberculin test, but this is not to be depended upon, since both lupus erythematosus and lupus vulgaris may elicit positive reactions.

PROGNOSIS

In the acute disseminated form the prognosis is, as a rule, unfavorable, as the cases are prone to terminate fatally. However, in the chronic discoid variety, the prognosis is more favorable, the lesions involuting spontaneously; however, with the formation of atrophic scars. The latter is not always the necessary culmination of a case; there are instances where the disease terminates at the erythematous stage—a so called *abortive attempt* without the formation of scales or subsequent depression and atrophy. At all times this dermatosis proves very refractory and nothing seems to influence its course or progress. In one of our cases involution took place rapidly by radio-therapy and the local application of Fowler's solution, together with gold and sodium chloride administered internally; while in two other cases the morbid process subsided and involution took place by the administration of Fowler's solution and endocrine (corpus luteum) together with radio-therapy and a scaling ointment composed of resorcin, salicylic acid, bismuth and ammoniated mercury.

TREATMENT

The treatment of this dermatosis is so variable and manifold that no one remedy can be relied upon exclusively. A legion

of medicaments, both local and systemic, have been suggested and tried. The treatment may be divided into *systemic*, *local* and *physio-therapeutic*. Of the former, quinine, as advocated by Hollander, parathyroid and calcium lactate, phosphorus, the endocrines singly, or in combination, have been advised; salicin, and the salicylates have been recommended by Crocker. Ichthyol, ergot, ammon.-carbonate, potass. iodide, and above all, arsenic, have received attention at the hands of dermatologists. Arsenic perhaps, having a selective action on the skin, is the most useful and has held out some promise in our hands, in conjunction with the endocrines, especially corpus luteum (in female cases). Neoarsphenamin has been used with variable success. All these remedies, however, are empirical, for they are not based upon a rational etiology. If we accept the toxic hypothesis of this disease, all these agents must fall into disrepute. There is, however, one remedy that promises, in the future, to displace all known therapeutic agents, viz. gold. This is administered by intravenous injection in the form of gold and sodium thiosulphate in varying doses of 10 mg. to a maximum of 50 or even 100 mg. twice weekly, gradually increasing. The first clinician to use gold was Reute. In 1921 Kohrs reported the complete disappearance of the disease following the intravenous injection of Krysolgan. Of course, in all cases of gold treatment, the urine should be previously examined: albuminuria and all nephritides are contra-indications for its use.

The *local* treatment must be carefully instituted. It must be remembered that in the erythematous form the lesions must be soothed, therefore, the application of irritating remedies must be refrained from. Such soothing remedies as calamine lotion, a 2% solution of aluminum acetate, magnes. carbon. and simple dusting powders are of value. Compression by flexible collodion is good practice, and we have seen favorable results in the discoid form when all remedies of a stimulating character have failed.

Fowler's solution, 1 in 9 parts of water, applied locally has been tried and found useful. In one of our cases the result was very startling. It may at first cause a temporary erythema, which readily subsides. Stronger caustics may also be employed, such as glacial acetic, carbolic and pyrogallie acids, but great care must be used in their employment. Nitric and hydrochloric acids should be used with

great caution and only after the milder caustics fail. Carbolic and lactic 1-4 has been recommended by Small in very stubborn lesions. Scaling pastes in the form of resorcin and salicylic acid or bismuth subnitr. and ammoniated mercury may be applied in milder cases. A favorite formula is as follows:

Rp.	
Acid salicylic	1.5
Ung. Hydrarg. ammon.	16.0
Bismuth subnitr.	4.0
Petrol alb. q. s.	30.0
M. et ft Ung. Sig.	Apply.

Medicinal soaps form adjuncts to treatment; the salicylic and resorcin soap may be recommended in mild cases. Of all the caustics employed, CO₂ snow occupies the foremost rank and the results obtained are very gratifying. It is self-evident that its use is contraindicated in acute cases, but when the lesions are refractory and obstinate, especially of the limited or discoid type, it proves a valuable therapeutic procedure.

Radio-therapy has not always been successful; some patients are markedly benefited by light therapy, such as direct exposure to the sun, or artificial actinotherapy; while again in other cases the disease may be aggravated by it. The efficacy of Roentgen therapy is disputed by competent dermatologists. More extended clinical observation and experiments are necessary in order to determine, in the future, the value of these agents in the treatment of lupus erythematosus.

A word about the *tuberculin* treatment. Cannon and Ornstein discuss the relationship between lupus erythematosus and lupus vulgaris as well as the tuberculin therapy. Various dilutions of Koch's old tuberculin were used. Subcutaneous injections were given twice a week. Fifteen cases in all were treated by tuberculin; three made an almost complete recovery, seven showed marked improvement while five were unimproved. The improvement, the authors remark, was very gradual.

CONCLUSIONS

Much work has been done in the past to clear up our conception of lupus erythematosus. Unless we can determine the etiologic factor or factors in the causation of this disease, our attempts at eradication will be far from satisfactory. Of the various remedies recommended, the *gold compounds*, used intravenously, hold out the greatest promise. This, however, must be substantiated by further clinical observations. The value of tuberculin has not been fully established. Local medication

is of questionable utility, and the remedies advanced are legion. Radio-therapy has not proven effective; on the contrary, it has at times intensified the morbid process. Suffice it to say that, for the present, we are at a loss as to a successful and specific form of therapy.

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ACUTE PANCREATITIS FOLLOWED
BY PSEUDO-CYST*

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Pancreatic disease is undoubtedly more common than supposed. The difficulty of diagnosing pancreatic conditions, both acute and chronic, and the absence of any reliable mechanical or laboratory tests, contribute to the doctor's dilemma. Moreover, the frequent association of pancreatic disease with other lesions of the upper abdomen, may obscure the pancreatic features unless we constantly bear in mind the possibility of this complication. However, a knowledge of pancreatic pathology and a carefully taken history in conjunction with a good physical examination, will lead us to a probable or certain diagnosis of pancreatic disease in most instances. In the more acute conditions this is important, because if treatment is to be of any avail, it must be prompt. The case which we present is of peculiar interest inasmuch as we can visualize the phase of biliary colic, the phase of acute pancreatitis, and finally the phase of pseudo-cyst.

Mr. F. M., a white male, age 36, was referred to us on June 8th by Dr. R. L. Phillips. His chief complaints were, epigastric pain, backache, and loss of weight. The family history contained nothing of importance. He had never been very ill, but for several years he had been overweight, weighing 230 pounds. In May, 1927, he had an

attack of "acute indigestion." This was characterized by the sudden onset of severe epigastric pain which radiated to the umbilicus and to the right scapula. The attack lasted about three hours and morphine was required to give relief. No jaundice, chills, or fever, followed the attack. He states that during the past year he has been distressed by flatulence, and that fatty foods seemed to disagree. This phase of the history presents a clearly cut picture of cholelithiasis.

On May 5th, 1928, he was suddenly seized with an attack of excruciating epigastric pain. This was of a colicky type, and radiated to the back and to the lower abdomen. He was admitted to Hurley hospital and several hypodermics of morphine were necessary to alleviate his distress. He stated that for three or four days deep breathing was very painful. He vomited incessantly for two days, in spite of gastric lavage and sedatives. The vomitus contained much mucus and was bile-stained. He was much distressed by the eructation of gas between attacks of vomiting and also had a great deal of hiccough. Tenderness could be elicited on deep pressure over the right hypochondrium and epigastrium. There was no marked muscular rigidity, merely a suspicion of resistance. No jaundice was observed, but he had a pronounced pallor with a suspicion of cyanosis. His temperature ranged from 99 to 101 for four days and rather pronounced sweats occurred at irregular intervals. In spite of this fever, his pulse was relatively slow, 80 to 100. His blood count showed 18,500 leucocytes with 81 per cent polymorphs. The stools were slightly pale, but were not greasy. While he was very weak, yet at no time was he in definite collapse. He was very restless and could not sleep. The pain in the epigastrium continued for about a week, but it was not of the colicky character which characterized the onset. An X-ray study of the gastro-intestinal tract was made on May 8th, the roentgenologist reporting "practically a normal G. I. tract" and a "positive Graham."

It is perfectly clear that during this episode, our patient had something more than a biliary colic. The attack lasted too long, and had associated symptoms suggestive of acute cholecystitis. The absence of collapse and of signs of epigastric peritonitis made a fulminating pancreatitis seem improbable to the attending physicians. The patient did not consent to operation and left the hospital on May 9th. His appetite did not return, he had constant epigastric distress and lost 30 pounds in the next month. At the time of our consultation, on June 8th, he stated that he had never really been free from epigastric pain and soreness since the attack in May. At times, he was distressed by sharp paroxysmal pains which would radiate over the entire abdomen, as well as to the back. These pains were associated with a little nausea, and could easily be interpreted as due to coeliac plexus irritation. He stated that a mid-dorsal backache was increasing in severity every day and that now it prevented him from sleeping. While he had desire for food, he found that a few

* Clinic at Hurley Hospital Post Graduate Conference, Oct. 25, 1928.

mouthfuls seemed to fill his stomach. He said that he was "short of breath" and that he felt very weak.

Only the relevant features of the physical examination will be reported. He was well developed, but flabby; his color was pale and the sclerae clear. On inspection one was struck by pronounced fullness in the epigastrium. On palpation, one could feel a round, smooth, tense swelling. Its lower border was midway between the umbilicus and the ensiform cartilage. While mainly central, it seemed to project up and under the left hypochondrium. It was immovable on palpation and moved slightly, if at all, on deep inspiration. There was a well-marked transmitted aortic pulsation. On percussion, this area was dull. The liver boundaries were within normal limits and no ascites could be demonstrated. The stools were pale and showed excessive fat (steatorrhea) and many undigested meat fibres (azotorrhea). The urine was not abnormal. The blood examination showed a slight leucocytosis. A further X-ray study was completed on June 12th by Dr. C. D. Chapell. He reported that "there was a constant filling defect of the mesial portion of the stomach." "In the lateral oblique position, a mass seemed to push the stomach forwards and also cause some obstruction of the duodenum, as evidenced by a six-hour residue."

These findings seemed to justify the diagnosis of a pancreatic cyst and an operation was advised. On June 14th, Dr. J. G. R. Manwaring opened the abdomen by an epigastric incision, extending obliquely across the right rectus. The gallbladder was opened and the walls found to be thick and whitened. There was a crop of large stones, one-half inch in diameter, and many smaller stones the size of peas. The stones were removed and a large tube sewed in. The gastro-colic omentum was then incised and a large pancreatic cyst presented. This was opened and about a quart of dark, mucoid, blood-stained, necrotic material evacuated. The pancreas was large and infiltrated, presenting several nodules resulting from an old fat necrosis.

The cyst cavity was packed with iodoform gauze and rubber glove drainage placed about the sac.

The post-operative course was a rather stormy one during the first week. His temperature ranged from 100 to 103; his pulse was rapid and small, remaining at about 120; he was restless and perspired a great

deal. He vomited incessantly, the vomitus consisting of mucous and brown coffee-like fluid. On one occasion he vomited a large amount of blood. Drainage was profuse and for a few days had a foul odor. On June 29th the pack was removed and the discharge soon became serous. This discharge must have contained ferments, because it irritated or digested the edges of the wound so much that bleeding occurred. In the second week he improved rapidly and was able to take food. He was able to sit up on July 5th and left the hospital on July 12th, with a small rubber drain in the fistula, but otherwise in good condition. Drainage soon ceased and by September 1st he was quite well and able to resume his work.

The first pancreatic cyst which we were privileged to see, was in N. Senn's clinic in 1903. It will be remembered that Senn had well established the clinical picture of pancreatic cysts as early as 1885, and really, very little has been added to the subject since his time. However, clinical observations and experimental studies have somewhat clarified the pathology of those cysts which result from pancreatitis, both acute and chronic.

CYSTS AND GALLBLADDER INFECTION

The relationship between cysts and infection of the gallbladder has been clearly demonstrated for many years. W. J. Mayo ascribes the frequency of pancreatic disease to "the unfortunate association of terminal facilities" of the biliary and pancreatic duct systems, and further ascribes over 80 per cent of pancreatic disease to gallstones. While Opie's original work seemed to point to the ducts as the only route by which infection was carried to the pancreas by retroinjection of bile, considerable doubt has arisen about this being the only route. Deaver's studies (1) pointed to the lymphatics as the route whereby infection was conducted from the gallbladder, bile ducts, and duodenum to the head of the pancreas. Rosenow, believing that streptococci may acquire specific affinity for certain tissues, offers proof of a hemic origin, the cholecystitis and pancreatitis co-existing because of a common origin.

The more recent experiments of Archibald (2) have shown that a reflux of bile can set up an acute pancreatitis. This reflux is not necessarily caused by a stone in the common duct occluding the duct of Wirsung. A reflex spasm of the sphincter of Oddi, initiated by an irritable peptic

ulcer, or by gallstones elsewhere than in the common duct, can produce the same effects. He has further shown that the bile need not be infected to initiate pancreatitis. Positive cultures are of little value because of secondary infection by the *B. Coli* and other bacteria at a later stage. G. Egger's (3) case corroborates Archibald's view. His patient died soon after the onset and he found a strip of necrotic tissue extending along the duct, the entire length of the pancreas, while the periphery of the pancreas was intact. The pancreatic juice per se is not an active ferment, and just what activates it is not entirely settled. It would therefore seem that much of pathogenesis of acute pancreatitis is still an open subject.

During an attack of acute pancreatitis, the activated enzymes of the gland produce a necrosis of several lobules, with or without much hemorrhage. The surrounding fatty tissues are saponified, presenting the characteristic picture of fat necrosis. The resulting debris distends the capsule of the pancreas, producing a pseudo-cyst, that is, a cyst whose walls are not lined by epithelium, and whose capsule may be derived from other tissues than glandular ones. Blood and pancreatic fluid may accumulate in the lesser peritoneal sac, the Foramen of Winslow being closed by inflammatory changes.

Severe trauma may result in a hematoma of the pancreas, in which case, autodigestion of the encapsulated blood will lead to cyst formation. We have seen one instance of a chronic ulcer of the posterior wall of the stomach infecting a portion of the pancreas with subsequent cyst formation.

PANCREATITIS PICTURE

A low grade chronic pancreatitis produces an entirely different pathological and clinical picture. Fibrosis causes stenosis of a small duct or ducts. These dilate, the epithelium proliferates and lines the cyst wall. These are properly classified as retention cysts. Obviously such cysts may be either single or multiple.

The symptoms of pancreatic cysts depend on the disease which leads to cystic formation. Hence, retention cysts, following a chronic indurative pancreatitis, will present a very different picture from those resulting from acute pancreatitis. Similarly parasitic cysts due to the *Echinococcus* and the proliferation cysts arising from neoplasms will give quite different histories. Some cysts may be quite devoid of symptoms and may be discovered only

by physical signs. In many instances there are evidences of lowered pancreatic function, such as loss of weight, fatty stools, and glycosuria. The special pancreatic function tests are of doubtful clinical value in the demonstration of slight functional variations.

The physical signs are not constant. Cysts vary in size and position, the latter depending upon the part of the pancreas which may be involved. The relation of the cyst to peritoneal reflections in a given case determines whether it shall point above the stomach, behind it or below it. If the tail of the pancreas is involved, it may simulate a cyst of the spleen. If the head is involved it may simulate a renal tumor. Never under any circumstances attempt an exploratory aspiration, for there is the danger of the tense cyst leaking and producing peritonitis or a widely disseminated fat necrosis. The X-rays can furnish valuable evidence, especially plates taken in the lateral oblique positions.

The process of differential diagnosis brings up many things for consideration, but we shall deal with the more important only. Aortic aneurysm will usually be associated with a history of syphilis. The pulsation is expansile while the pulsation in a cyst is merely transmitted. We have found it helpful to examine suspected aneurysms in the knee-chest position. A greatly distended gallbladder may simulate a pancreatic cyst. This will have a wide respiratory excursion, while a cyst has none. It is not covered by the stomach or colon, while the cyst always is. This fact can be determined by the X-ray or by inflation of the stomach and colon. Ovarian cysts originate in the pelvis and when they rise high in the abdomen, the vault of the vagina is almost always pulled upwards. Mesenteric cysts are smooth and tense, usually presenting near the umbilicus. They are freely movable in the axis of the mesenteric attachments unless fixed by inflammation or adhesions. They have a much longer duration before the onset of pressure symptoms. A slowly perforating peptic ulcer may initiate a retroperitoneal, subdiaphragmatic abscess which may resemble in symptoms and signs the pseudo cyst following acute pancreatitis. There is usually more fever and a higher leucocytosis. The diaphragm is pushed up and a characteristic bulging can be demonstrated by the X-ray. The breath sounds at the base of the lung are apt to be diminished.

The prognosis of pancreatic cysts depends upon the etiological factors. The

usual tendency is for the cysts to increase in size. The cyst may rupture into the peritoneal cavity and produce peritonitis and fat necrosis, or it may rupture into the intestine, the tumor disappearing. Pancreatic function may be lowered, and one of our cases developed diabetes two years after drainage. The results of operation are quite satisfactory, although an operative mortality rate of from 6 per cent to 10 per cent may be expected.

PREVENTION BETTER THAN CURE

Preventive treatment is better than cure, and inasmuch as 80 per cent of these cysts follow gallstones and gastric ulcer, these sources of infection should be removed. Acute pancreatitis should be treated by direct and free drainage just as soon as diagnosed, unless the patient is in profound shock. The acquired cysts should be treated by drainage and packing. Drainage of multilocular cysts is inadequate and nothing short of complete removal is of any value. At the time of operation, pathological conditions of the gall-bladder should be treated in the usual way. For some time after a successful operation, the patient should be carefully examined to discover any loss of pancreatic function, in order that suitable diets may be prescribed.

1. Deaver: Jour. Amer. Med. Assoc., 1917. 11-434.
2. Archibald: Surg. Gyn. & Ob., 1919. June. 529.
3. Eggers: Annals of Surgery, 1924. Aug. 193.

SURGICAL INDICATIONS IN THYROIDISM

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FLINT, MICHIGAN

This is a pathological entity in which the thyroid, by either pressure symptoms or dysfunction, is causing symptoms traceable to the thyroid. We may dismiss the so-called hypothyroid type as not amenable to surgical intervention or the cretin type, which is very uncommon in this country, but very prevalent in the mountain districts of Europe and Asia in which transplantation of the thyroid has been attempted.

De Quervain states in a series of his cases in which he transplanted the thyroid of humans into long bones and in which he noted some improvement, but feels that a lapse of twenty years is necessary

to fully judge the results. In this country the results of transplantation have been uniformly ineffective.

Coming back to the type of thyroid enlargement that does not for a long time of its existence show any marked symptoms, the so-called colloid type, beginning with a slight enlargement at puberty or pregnancy and seemingly disappearing at times, to take on new zest and activity at twenty-five or thereabouts, the patient showing slight palpitation, moderate loss of weight, perhaps a slight tremor and mild cardiac symptoms. I think this type of thyroid should be considered as one that may become very toxic, for fully 30 per cent of these will so develop and 2 per cent may become malignant.

Illustration, hospital case No. 50301, entered hospital April 20, 1928, age 51. C. C. General nervousness, tremor, precordial pain, dyspnoea, dysphagia, swelling on right side of neck, loss of 30 pounds in three months.

Patient states that he had had a large neck for many years, but growth increased rapidly from the first of the year. Past history irrelevant except that prior to noticing the rapid enlargement of the neck he had what was diagnosed elsewhere as "typhoid pneumonia". Probably an intercurrent infection of the bronchio-gastrointestinal tracts.

Family history—Mother died of cancer of the uterus.

Physical examination—Fairly well developed, middle-aged man, not acutely ill. Eyes react to light, slight exophthalmus present, widened palpebral fissures, teeth and tonsils out. Marked enlargement of the right side of neck, some enlargement in middle, no apparent enlargement of the left side of neck. Chest negative, no palpable cardiac thrill, tremor present in both hands, no murmurs, heart rate 96, B.P. 150/110 B.M. plus 23, urinalysis essentially negative. Blood sugar 102 mgms. Blood urea 30 mgms.

Provisional Diagnosis—Adenoma of thyroid, infected cysts of thyroid.

Final diagnosis, including pathological diagnosis—Infected adenomatous, cysts and encapsulated adenocarcinoma. Patient well. B.M.-I. Gained about twenty pounds.

Yet another type which is often met with is the type of goitre that is very insidious in onset, with very extensive pathological changes due to a so-called secondary toxicity of a long existing adenoma as best illustrated by Hurley hospital Case No. 52039. Age 60.

C. C. Palpitation, precordial pain radiating to left shoulder and elbow. Palpitation very marked on slight exertion. Feels choking, especially at night. At times dysphagia. Extremely nervous and weak.

Physical examination—Woman weighing about 110 pounds, shows loss subcutaneous tissue. Scalp negative, eyes stary, definite exophthalmus present in left one, right eye not so dominant, teeth out, fine tremor present in tongue. Neck contains large massive tumor size of grapefruit on left side. Marked pulsation, chest essentially negative. Heart rate 110 regular and extra systolic murmur, some cardiac enlargement, general arterio sclerosis. B.P. 140/98. Abdomen flabby,

* Read before Michigan State Medical Society and the Department of Post-Graduate Medicine, University of Michigan Post-Graduate Conference, Flint, Michigan, October 24-25, 1928.

essentially negative. Marked tremor in fingers.

Laboratory findings: B.M. plus 58, blood urea 42 mgms., urinalysis pus and epithelial cells R.B.C. 5,600,000, hemo 95 per cent, color 0.8, W.B.C. normal bounds.

Pre-operative diagnosis: Graves disease, cystic adenoma, secondary toxicity of thyroid.

Pathological diagnosis: Fetal adenoma with extra adenomatous parenchymatous hypertrophy, Graves disease.

Patient discharged with B.M. rate of plus 9.

The above two cases illustrate the necessity of careful watching of the so-called innocent thyroid enlargement.

The frank case of exophthalmic goitre is unquestionably easy of diagnosis and is usually operated after proper pre-operative care, which has become just as important as any phase of the operative cure.

More and more our patients present themselves for enlargement of the thyroid which usually appears innocent in the early stages, but if an iodine course fails to diminish the size as well as the slight toxic symptoms, I believe one is justified advising surgical interference, especially above twenty-five year limit.

A type of case lately referred for surgical treatment are patients with slight cardiac changes or presenting organic lesion with a co-existing apparently inoffensive lighting up of the thyroid will greatly aggravate the cardiac pathology and many eminent clinicians are advocating the so-called prophylactic thyroidectomy.

A diagnosis of fetal adenoma is an indication for removal, for very often extra adenomatous changes immediately surrounding the adenoma induce changes in the gland which may only be cured by removal.

Indication for ligation of the superior thyroid arteries have been greatly diminished, due to widespread use of preparatory iodine treatment, and is almost becoming a rarity. The multiple stage operation as advocated and practised by Willard Bartlett, is also becoming a less necessity, due to more thorough pre-operative treatment, as digitalization, practiced by Crile and others, Lugols, etc. Goitre patients with grave cardio-vascular and severe nephritic changes should best be left alone as the death rate is very high amongst them.

The adolescent type of goitre, even with toxic symptoms, should be first treated by a medical regime, and if not abated, should be considered as a possible surgical indication.

Goitres in the young must be watched carefully as the operative risk is greater with them in thyroidectomy. Prolonged

X-ray and radium treatment in goitres, though reducing the metabolic rate and size, yet do not seem to have as favorable influence on the heart, and cases so treated are extremely hard to operate.

The improvement noticed after a careful pre-operative regime in which Lugols solution, rest and sedatives were employed, often give the patient a faulty conception and the surgeon must warn of its transitory character. Old age is not a contra-indication, but a careful blood analysis and urinalysis are of prime importance. Diabetes, when present, need not be feared for we now possess Insulin, which should be used as indicated. Last and not least, the patient must have no fear and usually a patient lying in bed without any pronounced anxiety and able to relax, is a good risk. Surgery should rarely be undertaken on maniacal patients or on patients with ascending B. M. rate. Basal metabolism is extremely valuable, but should not be considered as an absolute criterion. It is only one of the many signs and not the one, "the clinical interpretation of the symptoms plus the laboratory findings are the only criterion to judge by."

INDEXING AND FILING HOSPITAL CASE RECORDS—A DESCRIPTION OF THE METHOD EMPLOYED AT HARPER HOSPITAL, DETROIT, MICHIGAN

CHARLES E. DUTCHESS, M. D.*
DETROIT, MICHIGAN

Indexing and filing hospital case records so they will be available for research, analysis, or any form of study, is not easy. This task is frequently delegated to clerical employees who have scant technical knowledge of medicine, and who receive very little co-operation from attending or staff physicians. This situation makes it highly desirable that a system of indexing should be as simple as is consistent with adequacy. If clerical employees are compelled to maintain a state of war with medical men the non-combatant records will bear the brunt. On the other hand, if filing clerks must file as best they can without bothering physicians for corrections or assistance, some astounding mistakes will be made.

Elaborate systems for case indexing

* Dr. Charles E. Dutchess has been assistant editor of the Wayne County Medical Bulletin for three years and he is at the present time editor of the same. He was graduated from the University of Indiana Medical School in 1920 and is also a graduate of Purdue University. Dr. Dutchess limits his work to obstetrics and gynecology.

have been devised, some of which require expensive equipment and great expenditure of time. Other systems are simple enough, but give only inadequate information. Not being satisfied with any system inspected, we have worked out a method which seems to give all essential information with a minimum of time and effort. A description of this method will perhaps allow readers to decide whether it is suitable for their use. Anyone wanting further information about this method may communicate with the Record Librarian, Harper Hospital, Detroit, Michigan.

On the first sheet of each case record is a generous space in which the attending physician or interne may write his diagnosis, etc., for index information (see Fig. 1). In most cases there is an obvious "primary diagnosis" which is recorded, Although the condition may be obvious, the nomenclature employed is likely to be as varied as ingenuity can devise. For this reason a standard nomenclature must be strictly followed; and we have found the Massachusetts General Hospital Classification of Diseases quite satisfactory. (Any such adequate classification might be used). Copies of this booklet are provided for internes' use. If the diagnosis supplied does not conform to this classification the chart is sent back for the interne's correction. When a patient has two or more diseases of apparently equal importance any one of them may be given as the "primary diagnosis" provided the others are listed under "Complications or secondary diagnosis." (See Fig. 1).

In detailing complications, as in giving the primary diagnosis, it is imperative that a standard nomenclature be followed; otherwise attempts to index complications will only result in chaos. Practically all complications may be found in the Massachusetts General Hospital Classification of Diseases. Whenever the standard nomenclature is found incomplete additions may be allowed, but only when approved by a competent authority such as a department head or some physician familiar with the problems of the record department. By listing death as a complication we are provided with a file of all deaths.

In listing operations performed, again a standard nomenclature is imperative. "Thoracoplasty" and "Extra-pleural Pneumolysis" may refer to the same operative procedure, but a record clerk cannot be expected to recognize that fact. Nor can she be expected to recognize other operative procedures under the names which

ambitious surgeons and confused internes often give them. Being unable to obtain a standard operative nomenclature, we have compiled one of our own. The heads of various departments of the staff were re-

ADMISSIONS

HARPER HOSPITAL

CASE NO. 168000

LOCATION Div. 20

ADMITTED Jan. 3, 1929		DISCHARGED Died Jan. 6, 1929	
FULL NAME Doe, John		AGE 42	
SEX M	RACE White	S W D	
BIRTHPLACE Detroit, Michigan		NAME OF FATHER OR NEAREST RELATIVE Wife, Mary Doe	
ADDRESS 4442 Packard Ave.		OCCUPATION Machinist	
WHERE EMPLOYED Blank Motor Co.		RELIGION Protestant	
PHYSICIAN Dr. Richard Roe		TIME ADMITTED 2:00 A.M. By O.N.H.	
TRANSFERRED FROM		TO TRANSFER DATE	
FORMER ADMISSIONS NONE (GIVE DATES OF)		FORMER DIAGNOSES	

INDEX INFORMATION

TO BE FILLED OUT BY INTERNE OR RESIDENT AND APPROVED BY ATTENDING PHYSICIAN

PRIMARY DIAGNOSIS	Appendicitis, acute with perforation
COMPLICATIONS OR	Peritonitis, acute general
SECONDARY DIAGNOSES	Paralytic ileus
	Death
OPERATIONS	Appendectomy
	Enterostomy
SIGNATURE OF INTERNE	
SIGNATURE OF PHYSICIAN	

Figure 1

quested to submit names of the operations performed in their departments, and this has been added to as circumstances have required. Any such list should permit of gradual expansion.

When several operations are performed they are all listed under "Operations." (See example in Fig. 1). Blood trans-

DIAGNOSIS	Appendicitis, acute with perforation	ADMITTED 1-3-29
		NO. 168000
COMPLICATIONS OR SECONDARY DIAGNOSES	Peritonitis, acute general	FORMER ADMISSIONS (GATES OF)
	Paralytic ileus	
	Death	
OPERATIONS	Appendectomy	
	Enterostomy	
		PT Doe, John
		AGE 42
PHYSICIAN	Dr. Richard Roe	RACE OR NATIVITY White

Figure 2

fusions, even though done on the ward by the medical resident, may be listed as operations, thus providing a file of all transfusions performed. Spinal anaesthesia, autopsies, or other procedures may be in-

dexed in the same way, which readily compiles useful information. Such obstetrical procedures as breech extraction, forceps delivery, etc., may also be indexed as operations.

When the information on a case record has been found correct and complete, or has been corrected, the case is ready for indexing. For this purpose we have printed paper slips 4 inches by 6 inches in size. These are in four different colors, but are otherwise identical. (See Fig. II). Each of these has space for typing the following information.

1. Primary Diagnosis.
2. Complications or Secondary Diagnoses.
3. Operations.
4. Physician.
5. Date of Admission.
6. Case Number.
7. Previous Admissions.
8. Patient's Name.
9. Sex.
10. Age.
11. Race or Nativity.

Four files are kept: (1) Primary Diagnosis, (2) Complications, (3) Operations, (4) Physicians. Every patient has a white slip for the Primary Diagnosis file. As many carbon copies of this are made as are required for the individual case. A patient having no complications, secondary diagnoses, or operations, will have two slips, a white one for the "Primary Diagnosis" file, and a carbon copy (on a blue slip) for the "Physicians" file. In such a case the white slip will be filed in the "Primary Diagnosis" file under the guide appropriate to that particular diagnosis. The blue slip (a carbon copy of the first one) is filed in the "Physicians" file under a guide bearing the physician's name. When there are any complications one carbon copy is made (on a yellow slip) for each complication. These yellow slips are then filed in the "Complication" file, one under each of the complications diagnosed. Thus a patient having post-operative pneumonia and post-operative hemorrhage has a yellow slip filed under each of these headings (in the "Complications" file).

A patient having two or more operations performed will have a gray slip (carbon copy of the original) made for each operation performed. These gray slips are filed in the "Operations" file, one under each of the operations performed.

For a concrete example John Doe is diagnosed as "acute appendicitis with

perforation." He develops two complications, acute general peritonitis, and paralytic ileus, and dies. He is attended by Dr. Richard Roe, who performs two operations, appendectomy and enterostomy. This patient will require:

(a) One white slip which will be filed in the "Primary Diagnosis" file under "Acute Appendicitis with Perforation."

(b) Three yellow slips which will be filed in the "Complications" file, one under "Acute General Peritonitis", one under "Paralytic Ileus", and one under "Death."

(c) Two gray slips for the "Operations" file, one under "Appendectomy", and the other under "Enterostomy."

(d) One blue slip for the "Physicians" file, under "Dr. Richard Roe."

It will at once be seen that any one looking under any of the headings "Acute Appendicitis with Perforation" ("Primary Diagnosis" file), "Acute General Peritonitis", "Paralytic Ileus" or "Death" ("Complications" file), "Appendectomy", "Enterostomy" ("Operations" file), or "Dr. Richard Roe" (Physicians" file), will find a record of the above case. If the complete case record is then desired it will be found filed by case number and is readily available. Case numbers are assigned according to order of admission and run serially without interruption.

The significance of this type of indexing and filing should be apparent. For instance, any one interested in acute appendicitis with perforation can select all cases of that diagnosis; any one interested in acute general peritonitis occurring as a complication of other conditions can find all such cases; any one interested in all cases in which appendectomy (or any other operation) is performed can readily find them. This method is capable of other uses; age or sex incidence in a given disease can be readily studied, or a study can be made of fatalities, surgical or medical, in general or in disease groups. It would be tedious to detail the numerous types of study which can be made from such files; it will suffice to say that the possibilities are limited only by the industry of the student.

In a hospital having over 20,000 admissions annually these files are kept by a staff of three women who do also the routine work of the record department. The material being filed is inspected and checked daily by a physician. This will give some idea of the time required for this type of records. The expense of equipment required is negligible.

ICTERUS INDEX STUDIES IN LOBAR PNEUMONIA

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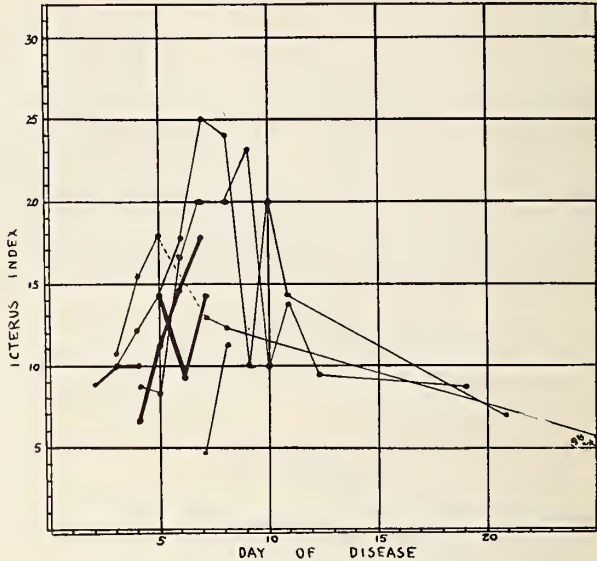
The bile-solubility of the pneumococcus, differentiating it from the streptococcus, used in the typing of lobar pneumonias, is a matter of common knowledge in everyday laboratory routine. From this fact an a priori hypothesis has been formed applicable to pneumococcic lobar pneumonia. Briefly stated it is as follows:

1. Lysis of pneumococci by blood bile in clinical lobar pneumonia may be part of the mechanism aiding recovery.
2. Changes in the icterus index during the acute course of lobar pneumonia may be of prognostic value.
3. This observation probably applies only when the pneumococcus is the sole of-fending organism.

So far this is purely theoretical and not based on adequate experimental data. The purpose of this paper is not to establish the proof of these suppositions, but merely to present results so far obtained as a preliminary investigation in the study of icterus index changes in the acute course of lobar pneumonia.

Daily icterus index determinations were made on all cases which from clinical and laboratory findings were typical primary pneumococcic lobar pneumonia admitted to the Highland Park General Hospital from August 1 to October 15, 1928. One, admitted with the diagnosis of lobar pneumonia, and having a normal icterus index, was later proved to be meningococcic meningitis. One case of empyema following lobar pneumonia, and requiring rib-resection, was found to have no change from normal when seen at the hospital.

15 were frequently accompanied by no definite manifestation of bile pigment deposit in the skin or conjunctivae.



Composite Curves

SUMMARY

In seven consecutive hospitalized cases of lobar pneumonia a disturbance of the blood bile content as shown by the icterus index occurred. Out of four cases that resulted in recovery an early rapid rise or a delayed but rapid and persistent rise was observed in three. Out of those that recovered an index of above 20 was sustained at the crisis in two, and a marked secondary rise occurred on the second day after the crisis. In another recovered case no determination was done on the day of the crisis, but a prompt increase in blood-bile occurred previous to it. Three recovered cases showed a maximum at the time of the crisis, followed by a marked drop on the succeeding day. One recovered case was not studied early enough to be of value. Two recovered cases showed an elevation above normal persisting for several days after the crisis. The fatal cases inconclusively indicated either a failure of the blood-bile concentration mechanism or an inadequate rate of rise early enough in the course of the disease.

CONCLUSIONS

1. A disturbance of the icterus index occurs in some case s of lobar pneumonia.
2. The curves so far obtained suggest a definite relationship between the icteric index and the acute course of lobar pneumonia.
3. Further conclusions are deferred until the study of more icteric index

ICTERUS INDEX TABLE																						
C = DAY OF CRISIS											D = DAY OF DEATH											
DAY OF DISEASE																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
RECOVERY	1		1.0	12.5	14.3	17.7	23	C	24	10	20	14.3										7.1
	2			7.7	7.2	6.4	20	20	C	25.1	10	13.7	9.1						8.9			
	3		10.1	15.4	17.8	7.8	C	12.9	11.9													5.1
	4							C	4.8	14.1												5.7
DEATH	1	8.8	10	D																		
	2					10.3	9.1	D	14.3													
	3					6.9	11.1	14.5	D	17.8												

The accompanying table and curves are self-explanatory. Icteric indices of above

curves is completed. It is obvious that these cases are insufficient in number for satisfactory interpretation of the results obtained.

4. A check on these findings by quantitative bilirubin determinations will be made in the next series of cases.

5. The theoretical aspect of this investigation will be discussed in a subsequent paper.

CHRONIC KIDNEY INFECTIONS*

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Many cases of definite pyelonephritis and cystitis may be excluded from the group of chronic kidney infections. The pyelitis of childhood, the transient infection in the adult, the infection secondary to renal or ureteral stone, to stricture of the urethra, to prostatic hypertrophy and the infection which is frequently encountered in hydronephrosis, all fall outside of the group which forms the basis of consideration for this paper. It is desired rather to consider that large group of cases in which there is definite evidence of the disease having lasted 5 to 10 years or more in which the etiology is more or less obscure. These cases are characterized symptomatically by bladder symptoms of a more or less chronic or at least intermittent type. The symptoms consist of frequency, some nocturia, together with more or less burning on urination. It is common to obtain the history of an occasional chill followed by fever which may confine the patient to bed for several days and which is frequently diagnosed influenza or the grippe. There is often the complaint of backache, one or both sides, which may vary in severity to renal colic similar to that produced by renal stone. Very infrequently associated with the pain or the chill and fever there may be a gastro-intestinal upset with nausea and vomiting. The patients will occasionally complain of "dirty urine" and occasionally of gross hematuria.

The findings in this group of cases are usually insignificant except for the laboratory, X-ray and cystoscopic findings. Urinalysis in the vast majority of cases will show nothing but microscopic variations from normal. The specific gravity varies with the fluid intake. It is unusual to find more than a trace of albumen and this

finding seems more likely to occur in the presence of microscopic blood. The finding of sugar must be regarded as quite coincidental. There will be a rather uniform finding of pyuria, although this may vary from day to day or even from specimen to specimen between rather wide limits. Blood in microscopic quantities is rather frequent in the presence of a pyuria. Much valuable information can be obtained from careful staining of the urinary sediment and with fair accuracy it can be determined whether the predominating organism is a coccus or bacillus, or whether there are no organisms present.

The cystoscopic findings vary at wide limits. The bladder may show only a very mild diffuse cystitis which is usually more marked about the trigone and ureteral orifices. The bladder mucosa in these cases will appear rather anemic, slightly thickened and dull and lusterless. The ureteral meatus frequently appears quite normal. Often, however, there is slight edema and reddening about either orifice. All degrees of variation in the severity of the bladder process may be seen. The cystitis may be very severe and diffuse with ulcerations of the mucosa and edema of such a marked degree as to make identification of the ureter orifices impossible. The ureter orifices may show dilatation and in fact the entire bladder picture may strongly simulate that of tuberculosis. Catheterization of the ureters and analysis of the split urine specimens will indicate to a certain degree its relative grade in either kidney and will further indicate whether or not the process is bilateral. There is a small group of cases, even in the presence of a low grade pyuria, which may, not on the particular occasion of ureteral catheterization, show pus in the ureteral specimen. The cystoscopic picture and the history, however, will usually give sufficient data to justify the diagnosis of bilateral pyelitis and cystitis. In the case of chronic unilateral kidney infections it is especially important to rule out tuberculosis.

X-ray offers very little in the cases of chronic kidney infections. About 10 per cent of the cases will be complicated by the presence of stone. The stone will without exception be proven by pyelography to be within the calyx, pelvis or ureter, and in this regard it very importantly differentiates the type of diffuse calcification which is occasionally seen in very chronic renal tuberculosis or in carcinoma of the

* Presented at the Second Annual Clinic of the Highland Park Physicians Club, December 1, 1927.

renal cortex. The indication for surgical removal of the stones is very much less clear than when the stone may be diagnosed as the primary condition. If the stones are silent their removal will not result in any material benefit in the pyelonephritis and will, therefore, not relieve the patient's symptoms. In the cases, however, where there is an occasional renal colic, perhaps with a chill, fever and exacerbation of the bladder symptoms, surgical removal of the stone would seem justifiable.

Urography offers very important data in this group of cases. There are a fair proportion in which the disease has not advanced sufficiently to give any dilatation of the ureter, pelvis or calyx, in which the pyelo-ureterogram may be quite normal. The most common and perhaps the most typical pyelographic abnormality is dilatation of the ureter. Frequently this is very marked so that the ureter may appear dilated to several times its normal size. It folds upon itself and presents in this way areas of apparent constriction. It frequently appears too long for the distance between the bladder and the kidney pelvis. The dilatation frequently affects the ureteral pelvis juncture so that the ureter joins the pelvis by a rather wide mouth, making it difficult to say where the pelvis begins and the ureter ends. It is common to see dilatation of the kidney pelvis of a rather irregular nature which rather more suggests a relaxation of the pelvis wall than a dilatation from increased intra-pelvic pressure. The calyces maintain their size and shape remarkably well even in the presence of rather advanced infection. In this respect the pyelographic picture particularly differs from that of renal tuberculosis. Tuberculosis is always primarily medullary and evidences itself by small irregular abscess cavities adjacent to one or more of the minor calyces. There is usually very little change in the appearance of the pelvis in tuberculosis and when there are pyelographic changes in the ureter they are evidenced by a very much smaller degree of dilatation and by definite areas of narrowing and stricture. It is unusual to find stricture in non-tuberculous infections of the kidney. Much confusion, has seemingly arisen from the pyelographic findings above described. It seems unreasonable to assume that apparent constrictions, due to dilatation of the ureter with folding upon itself or to spasm, which on subsequent pyelography can be seen to

have entirely disappeared or have changed position, could be due to an organic narrowing or could be favorably influenced by dilatation. Filling defects in the pelvis may occasionally be encountered due entirely to the presence of blood clots in cases of pyelonephritis with bleeding. These pyelograms so closely simulate those obtained in carcinoma of the renal pelvis as to need careful differentiation. The history, urinalysis and cystoscopic findings will usually introduce enough doubt that a carcinoma is present. Subsequent pyelograms will show a persisting filling defect if due to carcinoma.

The renal function in the cases of chronic kidney infections remains remarkably good. By the usual tests none but the most advanced cases will show evidence of deficient renal function. It is quite usual for the phthalein test to be normal. In the group of cases where marked dilatation of the pelvis and ureters exists the appearance time of the phthalein may be increased and there may be a deficiency in the percentage of dye returned. This group of cases may be further checked by the tests of retention (blood urea, non-protein nitrogen and creatinine content of the blood) and found to have normal function. This apparent discrepancy between the tests of excretion and of retention may be explained by the fact that dilatation of the ureters and pelvis increases the size of the urinary reservoir sufficiently to delay the appearance time and to reduce the percentage return per unit of time. Late in the course of chronic pyelonephritis the function tests may indicate marked reduction in renal function. There is usually abundant corroborative evidence of this failing function in the clinical appearance of the patient. It is rare to observe elevation of blood pressure—diminution of urinary output and retinal changes which are commonly seen in nephritis.

Excluding the cases of lower urinary obstruction, renal and ureteral stone, paralysis of the bladder and anomalies, the etiology of chronic pyelonephritis is obscure. Bugbee and others have discussed lesions of the colon as possibly responsible. Meisser and Bumpus, working along the line of Rosenow's work on focal infection, have produced experimental evidence in support of the view that focal infection plays an etiologic role. The long recognized foci in teeth and tonsils, and the more recently

recognized foci in the gallbladder, appendix, prostate and cervix, together with the systemic infections accompanying the common head cold, influenza, pneumonia and typhoid, must all be considered possible precursors of chronic pyelonephritis.

Treatment offers a wide range of alternate or combined procedures, with a fair expectation of improvement and a limited hope of cure. Elimination of focal infection will appear to pay large dividends in a moderate number of cases. Because it is impossible to ascertain which cases will be benefitted by any given procedure, the indication for a combined system of treatment is strongly presented. The tonsils should be carefully and, when possible, expertly examined. The small buried type of tonsil without a history of tonsillitis is liable to be a pitfall. Teeth should be X-rayed and in cases where all teeth have been extracted it is wise to rule out the presence of infected roots which may remain after extraction of the teeth. Rather sound experimental evidence has been advanced to support the view that all devitalized teeth are infected and that peri-apical abscess formation evidenced by X-ray is a defense against infection. By this token the devitalized tooth without evidence of periapical abscess formation is probably the more dangerous type to have. Chronic cervicitis or prostatitis should be treated by appropriate methods. Removal of the appendix or gallbladder as a direct attack on focal infection demands much more careful consideration, and doubtless, with regards chronic pyelonephritis, would rarely be convincingly indicated. Pierce and Corbett, however, have reported cases where improvement in pyelonephritis was thought to have occurred following cholecystectomy performed for the relief of gastro-intestinal symptoms.

Stock vaccines of the colon-typhoid group and autogenous vaccines from urine cultures are still employed, though less commonly than ten or fifteen years ago, in the treatment of chronic pyelonephritis. The most brilliant results with vaccines occur in the acute or subacute cases where the result without any treatment is frequently very good. In a careful review of 2,040 cases of chronic pyelonephritis it was noted in a small proportion that definite benefit seemed to follow the administration of vaccines. In this connection is it interesting to note the improvement which sometimes follows a long continued fever of an intercurrent disease or indeed

the chills and fever intercurrent in chronic pyelonephritis itself.

Intravenous treatment with various drugs has given rather indifferent results. Arsphenamine intravenously has been followed by a definite reduction in the amount of pus in the urine, but the improvement is usually very temporary. Similar results seem to follow the intravenous use of mercurochrome—220 soluble, acriflavine and methenamine. There seems to be no method of proof that the brilliant results following the use of intravenous mercurochrome in acute or subacute pyelonephritis would not have been forthcoming without the mercurochrome. The very severe chills, high fever, prostration, and the occasionally reported fatality following its use are dangers which do not justify its use in chronic pyelonephritis.

Surgery is not often indicated. Secondary stone formation, persistent unilateral bleeding, marked unilateral destruction with only slight involvement of the other kidney, the very rare case of stricture of the ureter constitute the principal indications for nephrectomy. Nephrectomy pelvio or uretero-lithotomy are sometimes indicated. Plastic operations on the pelvis or ureter are of very questionable value in chronic pyelonephritis.

The use of antiseptics by mouth have fallen of late into an unwarranted disrepute. If the drug be chosen with particular reference to the predominating type of infection, much improvement frequently results. By study of the stained urine smear the cases can be easily separated into the following groups: (1) pus without bacteria; (2) pus with bacilli predominating; (3) pus with cocci predominating. Although the following system has been found useful in a rather general application, variations to fit the individual case must be employed. In the group of cases with pus, but no bacteria, sandalwood oil in capsules is given three times daily after meals. The patient will usually tolerate 15-30 minims daily, slight backache or loss of appetite may occasionally be noted, in which case the dose should be reduced or another antiseptic employed. The absence of bacteria suggest the possibility of stone or tuberculosis which in the majority of cases must be treated surgically. For the bladder irritability of tuberculosis, sandalwood oil over long periods of time is still the best palliative method. Urotropin (gr. 7½) and sodium acid phosphate (gr. X) is used in the group with bacilli predomi-

nating. It is best given every six hours except as this schedule jeopardizes the long night rest period. Three times daily after meals and at bed time makes a satisfactory substitute for the six hour schedule. In the remaining group with cocci predominating sandalwood oil will give relief of bladder symptoms. Hexylresorcinol in large doses and over a long period of time has been found very effective in the control of bladder symptoms. It does not seem to have a sterilizing effect on the urinary tract. It is prepared in capsules each containing 0.15 grams of the drug. It not infrequently causes the irritation of the stomach and for this reason its use is started with one capsule three times a day after meals, increasing to four capsules on the fourth day, if tolerated. The beneficial effect of any of the urinary antiseptics given by mouth may very probably be due to the fact that a large fluid intake is always prescribed with the antiseptic. A daily intake of 3500 c.c. in 24 hours is considered a satisfactory range.

Periodic lavage of the kidney pelvis has long been accepted as a standard treatment in chronic pyelonephritis. Speculation has arisen as to the mechanism of the improvement noted from this type of treatment. The fact that equally good results are observed regardless of the type of irrigant used seems to indicate that the mechanical washing and drainage of the pelvis is the important factor. It has been suggested that the dilatation of the ureter afforded by the passage of the ureteral catheter is the important factor. This view has led to the rather wide use of dilatation of the ureter. Unless, however, actual narrowing of the ureter can be demonstrated the trauma resulting from dilatation would seem to contraindicate the general use of this method of treatment. Cystoscopy may be greatly facilitated and the bladder irritability markedly relieved in many of the very advanced cases by daily bladder lavage with mild irrigating solution.

The prognosis in chronic pyelonephritis was carefully studied in a group of 2,040 cases. They roughly fall into three groups of one-third each. One group with or without any very definite treatment seems to be eventually self limiting. A second group will be of the type that may never be considered cured, but in which the symptoms, as they appear from time to time, will show very marked improvement by appropriate treatment. There is still a third group which, in spite of treatment,

will be very slowly progressive and will eventually result fatally. It is possible, by means of the various diagnostic procedures available, together with observation of the results of treatment, to fairly well classify the individual cases into these three general groups.

AUTOPSIES — THEIR IMPORTANCE, WITH SUGGESTIONS FOR INCREAS- ING HOSPITAL NECROPSY PERCENTAGES*

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Someone has created an adage to the effect that a hospital is no larger than its pathological laboratory; and another that, strictly speaking, every death is a clinical failure. Both of these generalities must of course be qualified, but each makes in its essence one demand, and that the more frequent and thorough post-mortem study of the manifestations of disease.

The crying need for this has never been shown more strikingly than in Richard Cabot's report on 3,000 autopsies performed at the Massachusetts General Hospital¹. There under the eyes of a carefully chosen clinical staff, the following conditions were incorrectly diagnosed or entirely missed in the percentage of cases appended: diabetes mellitus—5 per cent; typhoid fever—8 per cent; aortic regurgitation—16 per cent; lobar pneumonia and chronic nephritis—26 per cent; cerebral tumor, tuberculous meningitis, and gastric cancer—28 per cent; mitral stenosis, cerebral hemorrhage, septic meningitis, and aortic stenosis—30-40 per cent; active tuberculosis—41 per cent; thoracic aneurysm—50 per cent; hepatic cirrhosis, acute endocarditis, peptic ulcer, suppurative nephritis, renal tuberculosis and bronchopneumonia—60-70 per cent; Pott's disease, hepatic abscess, chronic myocarditis, and acute pericarditis—70-80 per cent; and acute nephritis—84 per cent. A similar report by Karsner, Rothschild, and Crump² from a group of Cleveland clinics showed 8 per cent gross, and 60 per cent minor errors, with only 11 per cent of diagnosis entirely correct. Cabot's report was published thirteen years ago, and much water has coursed under the medical bridges of the world since then, bringing with it refinements in diagnostic technic, for the most part of an instrumental or laboratory character. However, the moral still holds,

* Read before the staff of the Receiving Hospital.

that to keep a suitably “humble and contrite heart,” and a sense of one’s diagnostic and therapeutic limitations, a more general use of the post-mortem room must be practiced.

AUTOPSIES IN DETROIT

This subject was brought to mind particularly as the result of an informal autopsy census, which was recently undertaken in Detroit, in which an attempt was made to obtain an accurate ratio of deaths to autopsies in the larger general hospitals of this community. Out of twelve inquiries sent out, eleven replies were received and the following is a resume of the data assembled:

	1922	1923	1924
Deaths	2,184	2,847	2,898
Autopsies	275	426	439
Percentages	12.6%	14.9%	15.0%

Although there has been a pronounced increase in the total number of post-mortem examinations performed, and some slight increase in the actual percentage ratio, the figures are rather discouraging, particularly when compared with those received simultaneously from more than a dozen representative eastern and mid-western general hospitals, picked more or less at random from the more widely known of this group:

	1922	1923	1924
Deaths	8,383	9,347	9,714
Autopsies	2,794	3,266	3,141
Percentages	33.4%	34.9%	31.5%

Among these were four municipal charity hospitals, with a composite percentage over the three years of 26.7%, and three institutions in which the patients are largely Jewish, whose total percentage over this period was 28.3%. These figures tend to refute contentions commonly voiced in hospitals whose records are inferior.

With the larger European and many Canadian hospitals running percentages varying between 80 and 100%, comparisons become even more odious. However, it is interesting and heartening to note that the situation in Chicago was very similar, and in fact the general percentage almost identical with that in Detroit, before measures were taken a few years ago (3) to arouse a more general interest in the obtaining of permission for post-mortem examinations. Since that time there has been a marked improvement, and this report takes origin from an attempt to duplicate these results in Detroit.

IMPORTANCE OF POSTMORTEMS

One might query wherein lies the importance of a systematic performance of post-mortem examination on all available deaths occurring under one’s observation. Perhaps the best single answer to this question lies in the improved morals of both attending and resident staff in these institutions where an autopsy is routine rather than an event of rarity. With frequent opportunities for checking up one’s clinical impressions, there is an unquestioned tendency toward increasing the minuteness of investigation, the accuracy of the case history, the placing on record of opinions and, all in all, the leaving of no stone unturned in arriving at a correct diagnosis. For oftentimes, by post-mortem examination alone are we able to confirm this diagnosis, and in many instances to explain the presence of some physical or laboratory finding, difficult or impossible of interpretation otherwise. Thus did Corvisart, Bright, Hodgkin, Addison, Auebruegger, Laennec, Skoda, and others of their ilk, correlate physical signs and autopsy findings and put the art of clinical diagnosis on a plane which without the disclosures of the dead-house would have been absolutely impossible.

Vital statistics are largely vitiated by the inaccuracy of diagnosis entered as causes of death on the mortality reports both of our hospitals and of the state boards of health. Necropsy records furnish the only means of correcting this situation, and give us actual anatomical findings rather than the too often false and misleading data ordinarily entered on our death reports.

In teaching hospitals, the matter takes on an aspect of paramount importance, being invaluable in properly nourishing and directing the tender shoots of clinical aptitude. For the student, more perhaps than any other, needs the chastening influence of the autopsy room on a premature enthusiasm, witnessing, as is inevitable, the mistakes of his elders, with an occasional diagnostic triumph, “the lump that leaveneth the whole loaf.”

For our pride in the institution of which we form a part, we must know that our hospital is being judged, in no small part, by its percentage of autopsies, and the use that is made of them. Through them doors are being constantly opened into fascinating realms of medical romance, which, when entered, may lead to discoveries of incalculable benefit to humanity. Hence it is not without good reason that

public health surveys give autopsy percentages as one index of the scientific attainments of a hospital staff.

METHODS OF APPROACH

Although frequently and probably more fully done before, it may not be amiss to outline a suggested technique of approach, which has been successful in a considerable number of cases where it has been used. I say "technique" advisedly, for tact, gentleness, sincerity, and patience are the keynotes in advancing a proposal against which there is ordinarily a marked preformed prejudice.

In the first place, it must be the duty of certain members of the staff to so instruct the incoming interne that he will at least have a program on which to proceed, when a death on his service brings the matter before him. The most important points, I believe, are briefly as follows: (1). The doctor who has been the closest to the patient and his relatives should assume the interview. (2). The nearest relative or friend should be approached—whenever possible alone. Additional listeners only mean more objections to answer, and, legally, the signature of the person next of kin is all that is required. (3). Favorable attention should be gained by explaining the procedure as a scientific investigation, done by skilled persons, not mutilating nor desecrating, and interfering in no way with the later preparation of the body. Words such as "autopsy," "cutting," "knife," and the like should be avoided, and "opening," "instruments," "examination," etc., used in their stead. (4). Point to the chart as mute evidence of what has been done for the deceased, and indicate that even with all of our best efforts, we are only able to carry so far, and that borderline cases baffle the best among us. (5). Call attention to the importance to the family of knowing the true and complete diagnosis, for it is their right and duty that they should know, from the viewpoint of personal satisfaction, particularly in an impending marriage in the immediate relationship, in settling insurance claims, and the chance that often incidental pathology of vast importance is disclosed. In appropriate cases may be stressed the possible benefit to the hospital in the management of the next case of similar nature; to humanity and the science of medicine generally, by enlightening as to the true character of certain maladies with a symptom complex like that exhibited by the de-

ceased, and enabling us thereby to earlier recognize and treat them, and not to stand helplessly by as may have been done in this case. For "in our obligation to the patient of today, we must not forget that there is a responsibility equally binding to the patient of the future." Naturally, on this point, as in others, our arguments must be varied, depending on the type of individual with whom we are dealing. (6). Never become angry or impatient, for "the right to refuse is inalienable," and once the person approached is ruffled or irritated, one is in a cul de sac from which there is no emergence. (7). Do not put the final question until reasonably sure of a favorable answer, for after a request has been made and refused, further parley is usually futile. (8). When permission is granted and the proper paper signed, leave promptly and have the autopsy performed as soon thereafter as practicable.

Objections may and will be raised, and these must be reasonably answered. They will fall in the main under two heads, sentimental and religious. The answer to the former lies usually in an appeal on the grounds of the benefit that might entail if the brother or some one equally near were to fall victim to the same illness, a happenstance not uncommon in the same stock; also, in his last opportunity to do something for suffering humanity, would not the deceased answer in the affirmative. The latter, or religious aspect, while sometimes offering an insurmountable barrier, can be truthfully refuted by statements of rabbi and priest high in influence in their respective faiths. They have definitely stated that there is nothing in their creeds which makes impracticable the post-mortem examinations of bodies on the ground of scientific inquiry. (Occasionally permission for limited examination may be obtained, when complete post-mortem study has been definitely forbidden.)

CONTRIBUTING FACTORS

To attain maximum effectiveness, the methods outlined above must claim as a background a strict co-operation between the clinical staff and (1) the administrative department of the hospital; (2) the coroner's office, and (3) the undertaker. The first is usually simple, the latter two often difficult, and sometimes impossible of attainment, depending on the personnel of the second, and the type of man making up the third in the community. The importance of the coroner's office will be seen from the statement that in the three

years 1922-1923-1924, inclusive, at a single hospital in our survey, there were 1,766 cases wherein either from the brevity of their ante-mortem period in the hospital, or from conditions surrounding their deaths, the bodies came under the jurisdiction of the coroner's office. Of these but a scant number were available for teaching or staff purposes. We have fervent hopes that there may be a remedy for this situation in the not-too-distant future. As regards the relation with the undertaker, it seems that the Chicago Medical Society has instituted a splendid plan in adopting in 1923 the following resolution:

"Whereas, a real obstacle in the way of obtaining permission to make autopsies is the more or less open opposition by many undertakers who advise against granting permission for various pretended reasons, a favored one being that 'the body cannot be embalmed after autopsies', and

"Whereas, certain other undertakers offer willing and helpful co-operation with physicians in securing autopsies, and announce that they can assure the relatives that the body will look just as lifelike, and can be preserved just as long as though no autopsy had been held, therefore, be it

"Resolved, that the council of the Chicago Medical Society records its hearty approval of the enlightened policy in favor of autopsies, recommends its prompt adoption by undertakers in general, and urges on the members of the Chicago Medical Society to insist on their inherent right, in the interest of the advancement of medical knowledge, to receive co-operation, and not antagonism from undertakers in seeking permission to make autopsies."

This or some similar action might well be taken in any community where the autopsy is a vital issue.

The interest and collaboration of the interne body is of paramount importance. In the fortunate hospital, the simple enthusiasm of the individual men may solve the problem; but, too often some additional stimulation is required. Sturgis (9) instituted a plan at the Peter Bent Brinham hospital of keeping records of the percentage of autopsies obtained by the individual senior house officers on whom the responsibility for obtaining permission rested. These records were made a part of the annual hospital report and the rivalry aroused on parallel services seemed to furnish the additional impetus necessary to produce a sharp and sustained rise in autopsies. This, with perhaps some pertinent reward for the highest percentage obtained should well serve to arouse backward interest in the question of autopsies.

CONCLUSIONS

An autopsy survey in the hospitals of Detroit was undertaken and the discour-

aging reports obtained precipitated the foregoing suggestions for the improvement of the existing situation. With better than 90% of the total available hospital beds represented, there had been, in the years 1922-1923-1924, 7,360 deaths, with 943 autopsies performed, or a total of 12.6%.

An attempt has been made to cover the principal points confronting one in an effort to obtain permission for the performance of post-mortem examination, and the writer feels that if a conscientious effort be made on these or similar lines in every case coming to exodus on our various wards, we may feel assured that a definite rise in our necropsy percentage will take place. With it must come, as an inevitable result, a sharp ascent in the interest of the attending and resident staff, with a consequent increase in the sum-total of our professional effectiveness, and an eventual priceless boon to the science of medicine and humanity generally.

Then may it less frequently be voiced with Matthew Arnold,

"Nor bring to see me cease to live,
A doctor full of phrase and fame,
To shake his sapient head and give
The ill he cannot cure a name."

A bibliography has been appended, which, while in no way complete, furnishes a list of the principal papers consulted in the preparation of this manuscript.

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A CASE OF TULAREMIA, WITH UNUSUAL ASPECTS IN DIFFERENTIAL DIAGNOSIS

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This case of tularemia is presented because of the scarcity of reported cases in

* Read at monthly staff conference of Wyandotte General Hospital Nov. 5, 1928.

Michigan, and because of certain peculiarly interesting features in differential diagnosis. It is thought that this disease is often missed because of its clinical resemblance to typhoid fever, malaria and certain types of influenza. I have been informed that infected rabbits have been found in Michigan this year, so it would not be surprising to see an increase in human cases in this state in the near future. No description of the disease need be given here, because the entire subject has been brought up to date in an admirable paper by Francis in the Journal of the American Medical Association of October 20, 1928.

CASE REPORT

R. G., a white woman, aged 22, married, with two young children, with a negligible family history, called me on October 4, complaining of chills, fever and exhaustion, beginning late in July, 1928. Her past history was irrelevant, except that in January, 1927, she had a similar attack which confined her to bed only a week, subsiding into a slow convalescence with extreme weakness. There was no history of handling rabbits or other wild animals.

The illness began while she was living in Tennessee, the onset being sudden. She called in a physician once; he thought she might have typhoid fever, and gave her one injection of typhoid vaccine. In September she moved to Michigan, but was unable to be up more than a few hours a day, had her daily chills, and grew progressively weaker. The family called me in because of a growing suspicion that she "might have consumption." Her menses had been suppressed since early in July, but examination indicated that pregnancy was improbable.

Examination October 4 showed slight conjunctival injection, and the ears, nose, throat and teeth revealed no local pathology. Chest examination brought out a systolic murmur over the apex, but there was no other evidence of cardiac nor pulmonary abnormality. The abdomen was flat, with no tympanites. Pelvis, extremities, reflexes and mental condition all seemed quite normal. She had slight bilateral cervical and inguinal adenopathy. The skin and mucous surfaces were very pale and the tongue was moderately coated (white) and dry. From October 6 to 12 she had a papular rash over the arms and trunk.

The temperature was 102 to 104 Fahrenheit, the pulse ranged from 90 to 110, and respirations were never increased above normal. No remissions were noted in the temperature curve, aside from the usual variation from morning to evening.

The laboratory reported a negative urinalysis, and 4,000,000 red cells and 10,500 leucocytes per c.m.m., with 72 per cent polymorphonuclears. Hemoglobin was estimated at 55 per cent. No plasmodium malariae was found in three successive daily examinations. Her Von Pirquet and Wassermann reactions were negative, but the Widal was positive. No growth was found on the

blood culture. A blood specimen sent to U.S.P.H.S. laboratory at Washington was reported as positive for tularemia, negative for undulant fever. No test was done for *B. Abortus*.

At home the disease was first regarded as malaria, because of the regularity of her chills and the southern origin of the disease. When she failed to respond to a course of quinine by mouth and two intravenous injections, she was moved to the hospital October 8, where the fever continued until October 20. Then it dropped to normal rather suddenly and has remained so. When last seen (November 5) she complained of nothing except extreme weakness. Her heart murmur was still to be heard, but its intensity was lessened.

Nothing was notable in her treatment, except that a single injection of neoarsphenamine did not appear to influence the course of the disease. Transfusion of whole blood was suggested, but refused by the patient, except as a last resort. I should have liked to observe the effect of a direct transfusion from an immune donor, but for obvious reasons this was impossible.

In diagnosis, malaria was first considered, but ruled out because of negative blood smears and the lack of response to the therapeutic test. The positive Widal suggested an infection of the typhoid group, but stupor, sordes, tympanites, soft spleen and characteristic stools were missing from the picture. The agglutination was explained by the injection of typhoid vaccine, which she received a short time ago. Miliary tuberculosis fell into the background after a negative Von Pirquet, and the subsequent course has borne out the reaction. The heart murmur and extreme weakness suggested a bacterial endocarditis of low virulence. However, the absence of signs of decompensation and the negative history in relation to rheumatism and focal infections led away from that hypothesis. Even after tularemia was diagnosed, I did not abandon the idea of an acute cardiac infection until an abrupt, afebrile convalescence ensued. I believe her murmur is functional, though I cannot dispute the opinion that there may be an underlying chronic mitral lesion.

In his report Francis suggested that this is probably a recurrent tularemia of the typhoid type, arising from an insect bite. This type of case has been prevalent in Tennessee, and recurrences have been recorded as late as twenty-three months after the primary infection. I am in accord with his suggestion, and very grateful for his assistance in working out the diagnosis.

MICHIGAN'S DEPARTMENT OF HEALTH

GUY L. KIEFER, M. D., *Commissioner*

NORMAL SCHOOL PROGRAM STARTED

The possibilities and disabilities of the rural school in the matter of health supervision and training have long been recognized, but the solution has not been so obvious. With the offering, this summer, of a series of twelve lectures to the 50 county normal training classes in the state, the department took a definite step toward the better training of teachers in the field of health. At the request of Webster H. Pearce, superintendent of public instruction, the series was also offered to the four state teachers' colleges.

Thirty-four of the county normal school principals accepted the department's offer and the first series of lectures will start at Kalkaska on November 5. They will be given by the bureau directors, each one talking on his or her specialty. According to the present schedule, the last normal will be visited in May, 1929, with eight weeks of lecturing by each speaker.

The following outline will show the type of material given. Each lecturer spends two forty-minute periods in each school, one devoted to lecturing and the other to demonstration.

OUTLINE OF LECTURES

I. Control of Classroom Contagion

Lecture deals with the general principles of the control and prevention of the common communicable diseases affecting children of school age, explaining their methods of transmission, the early indications, and the recommended classroom procedure. The major emphasis is placed upon prevention, including a brief discussion of the principles of immunity and their practical application in the prevention of diphtheria, scarlet fever, smallpox, and typhoid. The plan of state and local health administration as it relates to schools is explained.

The rules and regulations of the Michigan Department of Health for the control of common communicable diseases are used as the basis of the discussion.

II. Child Hygiene

Lecture describes the normal child, discussing height, weight, posture, skin, eyes, ears, breathing, teeth, throat, and extremities. Takes up the recognition of abnor-

mal conditions for which a child should be referred to the family physician. Emphasizes the essentials for good health, including shelter, food, rest, fresh air, sunshine, general health habits, and recreation.

A demonstration inspection of one child by the lecturer is followed by the inspection of children by the normal school students themselves, with comment by the lecturer.

Concludes with a brief description of the child care classes taught by nurses on the staff of the Michigan Department of Health and by local public health nurses. The department's Child Care Manual is given each student with recommendations for its use in the classroom.

III. Mental Hygiene

Lecture discusses the development of the mental hygiene movement and the close correlation existing between mental health and general health. Takes up some of the principles underlying the formation of good mental habits and the prevention of bad ones. Stresses the practical application of these principles both to pupils and teacher.

IV. Mouth Hygiene

Lecture takes up briefly the history of disease prevention and the relation of mouth hygiene to public health, discussing the recent advances in medical science as they relate to the hygiene of the mouth. A brief review of present mouth conditions among school children is given, stressing the effects of these conditions upon health and scholarship. This is followed by a discussion of the causes of tooth decay and the methods of prevention.

Emphasis is placed upon early dental attention and proper foods. Simple and practical methods of introducing mouth hygiene measures into the classroom are outlined, together with available mouth hygiene educational material. To complete the discussion, a demonstration dental examination is made of the children in the critic room.

V. Visual Aids in Teaching Health

Lecture discusses the visual aids which involve physical activity, including the ex-

cursion, modeling in different mediums, use of the sand table, drawing, painting, sewing, etc. Takes up the use of the flat picture, the illustrated text, the value of picture collections, the use of charts and graphs, and the making of posters.

Practical suggestions are given for different health activities through which the self activity of the child is awakened and his energy enlisted in the actual doing of the health habits.

VI. Methods and Material in Teaching Health

Summarizes briefly some of the methods used successfully in teaching health habits and attitudes, and outlines the materials available.

Includes a review of the main points of the foregoing lectures, and a concluding health knowledge test.

SIGNIFICANCE OF TWO PLUS BLOOD TEST IN TREATED CASES

In response to a recent query as to the significance of a two plus blood test the following answer was made. Queries of this kind are sufficiently frequent so that it is thought best to publish the answer. Greater detail would have been possible in a longer communication. The letter follows:

"Your letter is at hand, asking for an opinion of the significance of a two plus blood test in cases having had previous treatment.

"The Wassermann test or the Kahn test is of great value in determining whether a patient has syphilis or not. Once having made the decision that the patient has syphilis, I think the significance of the subsequent blood tests is somewhat diminished. The facts are, that the patient is syphilitic and needs at least three years of intensive treatment with arsenic and mercury. No blood test or finding of any kind have any bearing on this matter. I think we have been inclined to lean too much on a serological test as a "control of treatment." There is no blood test that will in any way change the diagnosis or alter the necessity of three years or more of treatment once diagnosis is established. It has been said of some clinicians that they treat the blood test of the patient rather than the disease of the patient. Perhaps this had been true in a few cases, as it would be a very easy error to fall into. If a patient has had syphilis and had received less than three years of intensive treatment, I would feel that it was of utmost im-

portance that he should receive whatever part of the three-year treatment had been omitted. I would take this position without regard to the blood test. At the beginning of the treatment, I would take a blood test and if it showed two plus positive I would feel that it confirmed my previous position. If the blood test was negative, I would feel that the patient needed that fraction of the three years' treatment that had not yet been received.

"You will note that I have frequently referred to the three years of treatment as being essential. In the army or other places where cases can be studied for long periods, they are finding an increasing number that require five years of treatment before they can be said to be cured. Of course, a great deal depends on the definition of cure. For those of us who must meet the world as we find it, I think it is well not to be too idealistic in this matter. We will certainly be accomplishing a great good for our patients and there will be far less tabes and paresis, if we can get them all to have at least three years of intensive treatment."—D.M.G.

PUBLIC HEALTH IN HOLLAND, MICHIGAN

The attention of physicians and health officers in several parts of the state has been drawn to the effective health program carried out by Dr. Daniel G. Cook, the health officer of Holland. He conceives the duties of the office to be largely that of formulating and getting into practice, the sound, well worked out public health procedures.

He sees in the physicians of his city the best possible means of giving to the people the best that is available in preventive medicine. The physicians of Holland act as the clinical arm of the local health department and carry out all the clinical work undertaken by the department.

No clinical work is undertaken by the health officer, all of it being done by the physicians in active practice in the city.

A program of preventive medicine has been worked out by the physicians of Holland and their health officer that has made their city singularly free from the acute contagious diseases. In the fall of 1926 a program was worked out whereby the physicians of Holland immunized the entire school population against diphtheria. The health officer carried out the educational work, the propaganda and the organization of the work. The clinical work of administering the toxin-antitoxin

was all done by the physicians practicing in Holland.

So successful was this plan of promoting public health work that the following year the same form of organization was used to immunize the entire school population against scarlet fever.

As a direct result of this work, there has not been a case of diphtheria in a school child for the past two years.

The amount collected by the physicians for their work was slightly more than they would have received by taking care of the ten cases of diphtheria and one death that had been the previous yearly average. Nevertheless, by spending this money for prevention, the people have made diphtheria ancient history in their city and they have their children with them instead of adding to the number of children in the local cemetery.

Although the prevention of scarlet fever by active immunization has not had the long use that diphtheria immunization has had, the success of the diphtheria prevention work urged them to apply the same principles to the prevention of scarlet fever. The following year a similar piece of work was done in the active immunization against scarlet fever. Since the scarlet fever immunization has been carried out, there has not been a case of scarlet fever in the city of Holland, notwithstanding the fact that the township around the city has had many cases. So successful were the two previous campaigns of disease prevention that it was decided to do it again this fall. The same organization was used again. The health officer organized the work and informed the public concerning it. The physicians practicing in the city did all of the clinical work.

This year toxin-antitoxin and smallpox vaccine was administered to all children who had entered school since the previous work was done.

Holland is not the first nor the only city in Michigan to carry on work of this kind, but it is of importance that Holland should be added to the growing list of cities where the health officer can combine the forces of his office with those of the organized medical profession for the benefit of the public who, after all, are ones to be served.

D.M.G.

WOMEN'S CLASSES

The Michigan Department of Health offers to women in rural districts a series of six talks and demonstrations on maternal

and infant hygiene. The talks are given by a woman physician and the demonstrations by a graduate nurse.

Previous to organizing the classes in a county from which a request has been received for this service, the physicians of the county are visited and informed as to the nature of the classes and the method of conducting them. The approval of the physicians is always secured before any attempt is made to organize the classes. The subjects discussed are as follows:

Prenatal Care.

In this lesson the physician in charge of the classes discusses the hygiene of pregnancy including food, rest and exercise, and clothing, and stresses the importance of regular medical supervision throughout pregnancy. The nurse demonstrates the preparation and sterilization of supplies for home delivery, the preparation of the bed for home delivery, and the nursing care of the mother and baby during the lying-in period.

Infant Care.

The care of the child up to two years of age is included in this talk. The importance of breast feeding for the well-being of the baby is discussed, as well as the need of proper diet and sufficient rest for the nursing mother.

General hygiene of the infant is taken up; the nurse demonstrates bathing and dressing the baby and a model layette is exhibited. Mothers are told of the benefit of sun baths to aid in development of the baby and to prevent rickets. Mothers are advised whenever possible to have their babies under medical supervision.

Care of the Pre-School Child.

The child of pre-school age is discussed in a separate lesson, and mothers are told the foods necessary for the growing child. The need of sufficient rest and exercise are pointed out, and also the importance of protecting children of this age against disease by avoiding exposure to communicable diseases and by inoculation against diphtheria, smallpox and scarlet fever. Behavior problems and child training are included in the consideration of the pre-school child. Periodic examinations, followed by correction of defects, are urged, and attention called to the fact that it is particularly in the pre-school age that many defects develop, early correction of which is necessary for the normal mental and physical development of the child.

A lecture on the development and care of the teeth, and one on foods and food values in general, complete the course.

Roscommon and Ogemaw counties are now having intensive three-week courses in maternal and infant hygiene, taught by Dr. Ida M. Alexander of the staff of the Bureau of Child Hygiene and Public Health Nursing.

LABORATORY NOTES

It was announced last spring that the Michigan Department of Health was ready to distribute scarlet fever antitoxin. There is a supply of scarlet fever antitoxin ready for distribution to any physician who wires or writes for material. The funds of the Department are insufficient to go into general distribution at this time, as there are no funds available to pay for a stock of scarlet fever antitoxin to be placed with distributors for distribution in the manner we are now distributing diphtheria antitoxin.

On Monday, November 19th, at East Lansing, a meeting of clinical pathologists and bacteriologists was held for the purpose of organizing a society for the consideration of bacteriological and immunological subjects. The following program of original papers was presented:

1. The Therapeutic Use of Bacteriophage in Suppurative Conditions.—A summary of 175 cases. Thurman B. Rice, M.D., Indianapolis.
2. Filterable Forms of Bacteria. Philip Hadley, Ph.D., Ann Arbor.
3. The Effect of Sunlight and Ultra-violet Light on Kahn Antigen. Grace Lubin, Ph.D., M. B. Kurtz, D.V.M., and Mary Crowley, M.S., Michigan Department of Health.
4. Pathology of B. Abortus Infection. E. P. Hallman, D.V.M., East Lansing.
5. Intestinal Lesions in Coccidiosis. H. J. Stafseth, D.V.M., East Lansing.

An interesting symposium on microbic dissociation was carried on under the chairmanship of Professor Philip Hadley of the University of Michigan. Dr. F. d'Herelle, discoverer of the bacteriophage, spoke upon this subject before a large and enthusiastic gathering. This meeting was sponsored by the Lansing branch of the Society of American Bacteriologists and the following organizations: Ingham County Medical Society, Michigan Department of Health Laboratory, Michigan State College Department of Bacteriology, Society of Sigma XI, East Lansing branch

of the American Chemical Society, Society of Phi Kappa Phi, and the Society of Phi Sigma.—C.C.Y.

A LARGE ORDER

Michigan Department of Health,
Guy L. Kiefer, M.D., Commissioner,
Lansing, Michigan.

Dear Sir:

Will you please send me the following pamphlets and also the list of the pamphlets that you have.

Public Safety
Public Utilities
Education
Taxation
Community

Anything that you have about:

Shakespeare
The Writing of Themes
Police

Yours truly,

(Signed)

ENGINEERING ACTIVITIES

Because the concrete of twenty years ago was not as water tight as that used now, a number of the inmates of the Michigan Home and Training School at Lapeer developed infection when a sewer on the grounds clogged and backed through an open pipe end. Sewage seeped through the ground the short distance from the pipe to the storage reservoir, and through the concrete wall of the reservoir, contaminating the school's water supply.

Even before the water sample sent to the state department laboratories was completely analyzed a wire was sent to Dr. Kay, superintendent of the school, saying that something was radically wrong, that the water was grossly polluted and unsafe. An engineer from the department immediately installed an emergency chlorinating apparatus while an investigation was being made. The open pipe end was soon found, and tests of the soil showed unmistakable contamination. The easy passage of water through the concrete wall of the storage reservoir was demonstrated when a trench was dug to inspect the reservoir wall.

Thorough disinfection of the polluted soil area and careful blocking of the open pipe end put a stop to the development of new cases.

An engineer has been assigned to work with the Grand Rapids Anti-Tuberculosis Society in their program of inspection of the county's rural school water supplies. Within the past two years the society has

collected and sent to the department laboratories more than 200 water samples from rural school wells. A total of about 75 samples indicate the need of special investigation, and this has already been started.

Surveys have now been completed for sewage disposal systems at the Michigan College of Mining and Technology at Houghton, the Michigan Branch Prison at Marquette, the State Hospital at Newberry, the State Hospital for the Insane at Ionia, the Michigan Reformatory at Ionia and the State Public School at Coldwater. Previous surveys have been made for the colony at Kalamazoo State Hospital, and the Girls' Training School at Adrian. Cost estimates are now in preparation.

Construction work at Camp Grayling is progressing rapidly. The sewage system is three-quarters finished, the water reservoir is completed, of the sewage disposal plants one is finished and the other is partly done, one well is completed and the other nearly so, and the pumping station building is at least two-thirds finished. One of the biggest items is the plumbing, and this is more than half done. The pipes for the water mains have been delivered but they are not yet laid.

Plans were recently prepared and construction supervised of the new sewerage and sewage disposal system at the Children's Home maintained by the Veterans of Foreign Wars, four miles from Eaton Rapids.

The breaking of ground marking the beginning of construction work on Grand Rapids' new \$1,400,000 sewage disposal plant was to be marked with appropriate ceremonies on November 2, according to an invitation received by Colonel Rich from City Manager Locke.

Mr. Locke says in part, "This is indeed an important occasion for Grand Rapids, in which we feel that you have a very interested part in that it marks the conclusion of a problem that has been with us since 1913. The occasion is furthermore of interest because it immediately precedes the November election, at which time Grand Rapids hopes to make possible for this city the most complete and well ordered system of financing disposal plants that exists anywhere in this country today."—E.D.R.

VISITS OF ENGINEERS DURING THE MONTH OF OCTOBER, 1928

Inspections of Railroad Water Supplies: total 25.

Baldwin	Grayling (2)
Benton Harbor	Harrison
Boyne City	Marshall
Cheboygan	New Buffalo
Clare	Owosso (2)
Durand	Petoskey
East Jordan	Saginaw (3)
East Tawas	Taylorville
Edmore	Vassar (4)

Inspections and Conferences, Sewerage and Sewage Disposal: total 14.

Bronson	Interlochen
Carleton (3)	Lansing
Chelsea (2)	Niles
East Lansing	North Porte Point
Flint (2)	Northville

Inspections and Conferences on Water Supplies: total 19.

Belleville	Haslett (3)
Caledonia	Muskegon
Carleton (4)	New Hudson
Flat Rock (2)	Sparta (5)
Harrison	

Inspections and Conferences, Stream Pollution: total 6.

Battle Creek	Coldwater
Bronson	Lansing (3)

Inspections and Conferences, Institutions: total 45.

Coldwater, State Public School, Sewage Disposal (3)
Eaton Rapids, V. F. W. Home, Sewage Disposal (15)
Grayling, National Guard Camp, Water and Sewers (2)
(Full time of two engineers on this work)
Ionia State Reformatory, Sewage Disposal (8)
Ionia State Hospital, Sewage Disposal (8)
Lapeer, Michigan, Home and Training School, Sewage Disposal (2)
Lapeer, Michigan, Home and Training School, Water (7)

Inspections and Conferences, Swimming Pools: total 2.

Belleville (2)

Inspections and Conferences, Miscellaneous: total 13.

Carleton, Sewage nuisance (3)
Detroit, Meadowbrook Country Club, Sewage Disposal
Grass Lake, School well (2)
Lansing, Resort Sanitation
Manistee, Scout Camp Sanitation
Maple City, Resort Sanitation
Merrill, Nuisance (2)
Okemos, Septic tank for private home
Walloon Lake, Resort Sanitation.

PREVALENCE OF DISEASE

	October Report Cases Reported			Av. 5 yrs.
	September 1928	October 1928	October 1927	
Pneumonia	241	326	239	265
Tuberculosis	233	735	523	442
Typhoid Fever	61	44	78	127
Diphtheria	239	498	403	634
Whooping Cough	874	850	442	407
Scarlet Fever	322	559	489	725
Measles	75	176	140	295
Smallpox	36	55	38	65
Meningitis	17	40	8	9
Poliomyelitis	25	13	91	60
Syphilis	1,512	1,567	1,367	1,275
Gonorrhea	921	985	1,057	1,027
Chancroid	9	12	9	15

CONDENSED MONTHLY REPORT

Michigan Department of Health Laboratories
Lansing Laboratory

	+	-	+ -	Total
Throat Swabs for Diphtheria				2064
Diagnosis	71	358		
Release	187	468		
Carrier	23	933		
Virulence Tests	16	8		
Throat Swabs for Hemolytic Streptococci				1350
Diagnosis	182	202		
Carrier	155	801		
Throat Swabs for Vincent's	52	377		429
Syphilis				8508
Kahn	1342	7090	73	
Wassermann	1	1		
Darkfield		1		
Examination for Gonococci	184	1310		1494
B. Tuberculosis				449
Sputum	93	356		
Animal Inoculations	3	47		50
Typhoid				172
Feces	4	63		
Blood Cultures	2	44		
Widals	5	51		
Urine		3		
B. Abortus	2	36		38
Dysentery	1	63		64
Intestinal Parasites				33
Transudates and Exudates				265
Blood Examinations (not clas- sified)				147
Urine Examinations (not clas- sified)				366
Water and Sewage Examina- tions				530
Milk Examinations				89
Toxicological Examinations				
Autogenous Vaccines				5
Supplementary Examinations				156
Unclassified Examinations				599
Total for the Month				16808
Cumulative Total (fiscal year)				58563
Increase over this month last year				4865
Outfits Mailed Out				20049
Media Manufactured, c.c.				158400
Typhoid Vaccine Distributed, c.c.				2270
Diphtheria Antitoxin Distrib- uted, units				6008
Diphtheria Toxin - Antitoxin Distributed, c.c.				58770
Silver Nitrate Ampules Dis- tributed				5962
Examinations Made by Hough- ton Laboratory				1491
Examinations Made by Grand Rapids Laboratory				6793

FURUNCULOSIS IN INDUSTRY

Occupational furunculosis has become so prevalent as to be known by identifying names applicable to the trades in which it occurs. "Salt infection," reported by Thurber and "sugar boils," described by Young, are recent instances. Medical literature reveals its common occurrence among ice cream handlers, beet sugar workers, butchers, lathe operators, bakers, oil workers, machinists, soap makers, tallow refiners, cold storage work-

ers, fertilizer makers, tar workers and street sweepers. The individual cases in each locality may be few, but their number in the aggregate demands attention. In ice cream handlers, in whom the skin is exposed to rock salt and water, salt infection is said to be due to "seeding" the hair follicles with pyogenic organisms normally found on the body and in the extraneous dirt that comes in contact with the skin. In beet sugar workers, sugar boils are said to be due to sugar dust and perspiration forming a culture medium suitable for the proliferation of these organisms on the body surface. In lathe operators it is said to be due to an infection of the minute wounds made by small pieces of metal that pierce the skin in the course of the work, or to the sealing up of organisms in the hair follicles by the oil that comes in contact with the skin, or to organisms being deposited there by the oil. In cold storage workers it probably results from lowered body resistance due to the sudden and frequent changes in temperature. In the other occupations it is also a natural outcome of the job in which the organisms normally found on the skin get a foothold as a result of conditions under which the work is done. It is the most common skin disorder among workers in the oil and sugar industries and is frequent in all occupations in which workers use their hands. The disease may be localized or systemic, depending largely on the general condition of the patient. If it becomes systemic it may lead to osteomyelitis, pericarditis or endocarditis. The organisms most commonly found are Staphylococcus albus and aureus. Such disease conditions hamper industrial progress, causing workers to seek other employment and raising multiple questions of compensation. Here again manual labor becomes martyr to the microbe.—Jour. A. M. A.

CALIFORNIA X-RAY LABORATORY
TO CO-OPERATE WITH BREEDERS

A new X-ray laboratory, for use in plant breeding experimentation, has been installed at the University of California, and will be available for co-operative researches by workers in other parts of the country. The plan is to have projected experiments submitted in outline to a special Committee on X-ray Experimentation at the university, and when this committee has given its approval, the pollen or other plant material to be X-rayed will be sent in to the laboratory, treated, and returned to the experimenter, who will observe and report the results obtained. In this way it is hoped to develop new varieties of fruits, crop plants and ornamentals which otherwise might never have come into existence. At the same time, results of value from the purely scientific viewpoint are expected.—Science Service.

FORMER GERMAN GIBRALTAR NOW
BIOLOGICAL STATION

Heligoland, the high, rocky North Sea island that was the Gibraltar of pre-war Germany, once counted nothing but new guns or submarine mines as valuable additions to its equipment. Now it boasts of a new aquarium, where German naturalists and their guests may observe the ways of North Sea fish, and watch the technic of diving seals and sea birds. One of the special features of the new building is an "arena" tank large enough to accommodate a large number of mackerel or other swarming fish and permit observations of their behavior when swimming as a school.—Scientific Service.

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DECEMBER, 1928

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon.

EDITORIAL

THE HOSPITAL SITUATION IN MICHIGAN

It is hoped that every one will read carefully the report of the committee appointed by the Michigan State Medical Society to survey and study problems of hospital charity in the hospitals of this state which appeared as a supplement to the November number of the Journal. The committee consisting of Doctors R. R. Smith of Grand Rapids, chairman; J. Walter Vaughan of Detroit and W. H. Marshall of Flint, Mich., deserve the thanks of every interested reader for this most exhaustive study of the subject. It has extended over a period of two years and the present report, together with the preliminary report, should be preserved as a matter of study and record. It is seldom that a committee goes into the subject entrusted to it in such exhaustive detail.

The report, it is seen, is divided into two

parts, part 1, relating to community hospitals and part 2, to the University Hospital. It is not the object of this editorial comment to summarize this work which has been done so effectively, but to call attention to features which might well be emphasized. In the first place the hospitals apparently have as vexatious problems as the medical profession have. Mention is made of the relation of the social worker to the hospital. It has been felt in some quarters that undue sympathy on the part of the social worker has resulted in the inclusion in the role of charity patients, many who have really no claim to free hospitalization or to free medical care on that basis. The committee has been impressed with the endeavor on the part of the social worker to be fair to all concerned and the report is a plea for greater confidence and greater co-operation between the social worker and the doctor.

Reference is made to the tax exemption privilege of hospitals, with the interpretation that this very fact presupposes a duty to the public, to which institutions contributing to the public treasury are not held. This section of the report, dealing with the subject of hospital financing, should be read in detail as it is well worked out and the patients' relations to the hospital are clearly defined. In regard to charity the report calls for greater co-operation with the doctor in as much as his judgment, though not infallible, is probably the most trustworthy factor in the determination of those who are entitled to charity.

President Coolidge is quoted in his warning against paternalism to which socialized medicine if carried to an extreme would eventually lead. "We believe that the personal practice of medicine is safer in the hands of the private physician than in those of the state." Reference is also made to the situation in Europe, where paternalism has been carried to an extreme. From this the report reasons that it is an axiom that no business or profession can succeed in giving satisfactory service unless the financial returns are in keeping with that service. Therefore the service that a physician may render to the sick must be in proportion to the financial rewards which in turn enabled him to avail himself of all advances not only in medical education but in material equipment as well.

* * *

The section referring to the University hospital is most exhaustive and here

credit must be acknowledged for the whole-hearted co-operation with this committee to Dr. Harley A. Haynes, director of the University hospital. The statistics, together with those of the preliminary report of last year, go a long way to clarify the situation.

The committee has accepted the definition of the state medicine as compiled by the American Medical Association. In its definition the American Medical Association recognized certain broad duties that devolve upon the state such, for instance, as the medical service of the Army and Navy and public health service which has to do with the control of communicable diseases and such other services approved by the State Medical Society. The report goes on to amplify public health work as it obtains in this state in the way of prevention of disease and public health education. It recognizes the duty of the health department over such public institutions as prisons and asylums of the various kinds as well as the employment of city and county physicians to care for the indigent.

* * *

The part of the report dealing with the University medical school is very full and complete and in our opinion fair. We must not lose sight of the fact that the University is *our* University, and that those who have had the advantage of academic training whether graduates of the State University or any other university are somewhat closer to the head of our educational system than non-graduates could be expected to be. The report goes into detail in regard to the classification of patients and their availability as teaching material. It is noted that in some departments there is an excess of patients while in others naturally a deficiency in the amount of teaching material desirable.

Group 6 consists of patients who are able to pay in addition to their hospital charges, fees for professional services, and are admitted to the services of medicine, surgery or X-ray; these average 684 a year. The idea of this group is to provide extra revenue to meet the need for increased salaries demanded by a full-time service. It is related that the fees from this group provide approximately 25% of this cost. The report disparages this practice and favors an arrangement whereby the physicians connected with the hospital might supplement their income by private practice. There could be little objection from the profession at large to this idea. It

would at least eliminate the practice of medicine by a state institution. "If the University Medical School and Hospital," continues the report, "to which we look for the highest standards, not only in scientific medicine, but as well in medical social ethics, are receptive to such practice, into what depths of unsoundness may not the rest of us be induced to dip? We suggest that very serious consideration be given to the question of this practice, and that it be annulled, if not at once, at least gradually."

In conclusion the report anticipates the day when the University of Michigan Medical School will not only send out well qualified medical men as in the past, but will continue its interest in them in the way of post-graduate instruction.

WHERE ELECTIONS FAIL

The Journal of the American Medical Association in a recent number commented on the work of the National Research Council in its investigation into the functioning of the office of coroner in this country. Probably the only class of people in the United States who are competent to make an intelligent selection of candidates and to vote on the office of coroner is the medical profession. As it is at present, the most ignorant voter in the country has the same privilege, or same responsibility, as the case may be. The medical profession are almost at the same disadvantage on the other hand when it comes to the selection of a judge, or prosecuting attorney requiring a special knowledge of the law, a city treasurer requiring technical knowledge of accountancy, or the selection of a keeper of a dog pound. How often have we gone to the polls to vote, to be confronted with a list of names of persons of whose qualifications we had not the slightest knowledge. The system is the outcome of the fact that when this country revolted against a monarchical form of government it went to the other extreme of democracy. The British system, after all, seems to render the greatest efficiency. A well chosen county council, city council or state legislature is in a better position to select officers requiring special education and technical skill than the body politic at large can ever hope to be.

The Journal of the American Medical Association gives numerous reasons why the office of coroner should be independent of periodic election. They may be summarized as follows:

"A politically elected medical coroner finds

himself confronted with embarrassing questions of political patronage. His personal and professional conscience is constantly tantalized by demands from his political associates and backers. One day he is asked to omit an autopsy for the sake of the family of the deceased, or to accommodate a politically important undertaker. Then comes a request to falsify his statement of the cause of death in order that the family of a deceased political henchman may have the benefit of the workmen's compensation act, to which they might not be entitled if the truth were told. To save the fair name of some one who had died from criminal abortion or from suicide, and to protect the family from the stigma attached to such circumstances, he is asked to suppress information. Sometimes his aid is sought to give the family of a deceased person the benefit of an insurance policy that covers death by accident, or to enable the insurer to escape liability under a policy that does not cover suicide. While the motives that may tempt a coroner to juggle with the orderly administration of the affairs of his office and with its records may have a political origin, monetary considerations may enter into such transactions, politics serving merely to embolden the wrong-doers by giving them an assurance of protection if discovered. All things considered, as long as the office of coroner is an elective office its duties will be unsatisfactorily performed."

These are possibilities; we do not deny that there are coroners who are not amenable to sinister influences. Similarly, in spite of our system of election of judges, the bench has been graced by some of the finest personalities in professional life. This does not mean, however, that a system of appointment would not secure greater independence for both judge and coroner to the greater efficiency of both.

THE THYMUS GLAND

The possibility of the presence of enlarged thymus is a matter ever present in the mind of the surgeon. It is almost a matter of routine in a number of the better hospitals to examine all children by means of the X-rays before the administration of a general anesthetic. The enlarged thymus gland has so long been associated with status lymphaticus that many children in whom enlarged thymus is in evidence are given prophylactic X-ray treatments. O'Brien* maintains that the subject of enlarged thymus resolves itself into two propositions, (1) Is there a symptom-producing enlarged thymus in infants that can be diagnosed by X-rays and relieved by radiation? (2) Is there an enlarged thymus without symptoms in infants, children and young adults that represents objective evidence of status lymphaticus which can be diagnosed by

X-rays and should receive prophylactic radiation?

According to Hammar† the thymus, instead of being a transitory organ, exists and functions until old age, though nothing is definitely known about its function. It is not a gland of definite secretion. It is presumed, however, to have some relationship to the sex glands. Basing their conclusions upon thymectomized animals, Park and McClure conclude that the thymus gland is not essential to life in a dog; extirpation of the thymus produces no detectable alteration in the hair, teeth, contour of the body, muscular development, strength, activity, or intelligence in the experimental animal. Apparently extirpation of the thymus does not influence either growth or development. Friedleben maintained that, though the thymus gland is not essential to life, it had a sort of adjuvant relationship with the spleen and that the thymus and spleen together were essential.

Hammar first demonstrated the so-called persistent thymus to be a normal condition and his conclusions were later confirmed roentgenographically by Wasson.

According to Hammar, fatal symptoms may result from pressure of the thymus on the air passages. It seems then that the danger effects of the so-called enlarged thymus are of a mechanical nature.

Mosher advocates a prophylactic dose of X-rays to all cases which show a distinct thymic enlargement, particularly when a general anesthetic is contemplated. O'Brien states it to be the practice at the Boston City Hospital and the Cambridge Municipal Hospital to examine all cases of young children before administering a general anesthetic and to treat those with enlarged thymus by means of the X-rays. "An infant presenting an enlarged thymus with symptoms should have radiation treatment. An infant presenting an enlarged thymus without symptoms need not have radiation, unless an operative procedure and general anesthetic is contemplated because in this instance an enlarged thymus may represent the normal growth of the gland." Under X-ray treatment involution of the thymus takes place rapidly and apparently without harm, therefore until further knowledge and experience would warrant a different conclusion, the advice here given is reasonable.

* The Diagnosis and Treatment of Enlarged Thymus by X-rays, by Frederick W. O'Brien in the New England Journal of Medicine, October 4, 1923.

† Loc. cit.

DANGEROUS COSMETIC AGENTS

The appointment of Mr. E. E. Valentini as executive secretary of the Wayne County Medical Society was confirmed by a unanimous vote taken recently, authorizing an increase in membership dues from \$20.00 to \$30.00 to meet the extra expense not only connected with this new office, but to take care of contingencies that may arise through increased activity on the part of the society. Mr. Valentini has been in office since July 1st. The consensus of opinion of the members is that the creation of the office of executive secretary has been amply justified. The executive secretary is on the job every minute. His services in some respects extend beyond the confines of Wayne county.

Among the health problems of every large city is that of the so-called beauty specialist who seems much in demand. Occasionally the so-called cosmetician or beauty specialist advertises to remove superfluous hair by means of the X-rays, or to remove warts or moles by means of electrolysis. Every physician knows that irritating moles are fraught with danger and that an X-ray machine in the hands of an unskilled person—by which we mean one not conversant with the biological effects of the X-rays—is a dangerous agent. We would go so far as to say the X-rays should never be employed by anyone where the purpose is solely cosmetic. The possibility for harm is too great. In regard to the use of X-rays by cosmeticians Mr. Valentini has obtained the following ruling from the attorney general of this state: "In view of the fact that the X-ray is commonly known to be a dangerous agency in the hands of those not qualified to apply it, I am of the opinion that the right to remove moles and excess hair by the use of electrical apparatus, as provided in the rules and regulations (of the Detroit Board of Health) does not carry with it the right to use the X-ray by cosmeticians."

APPENDICITIS

This is certainly a hackneyed subject and one on which it takes a great deal of courage to write with the hope of saying anything new. According to the Bureau of Vital Statistics, 25,000 people die each year in the United States from acute appendicitis. The American Journal of Surgery editorially warns against the danger of giving laxatives haphazardly in acute abdominal lesions. Particularly is it dan-

gerous to give either castor oil or saline cathartics in acute appendicitis. However, patients themselves are apt to resort to catharsis as first aid in abdominal pain before calling in the doctor. The American Journal of Surgery warns against the use of the ice bag. The feeling of security that comes with the diminution of pain in the application of an ice bag over an inflamed appendix is misleading. This Journal quotes the response of the late Dr. W. F. Campbell to a query as to the possibility of a "cure" of appendicitis by the application of cold. "Gentlemen," said he, "when you use ice in the cure of acute appendicitis you are gambling with death, and the dice are loaded against you." Among the don'ts enjoined by our contemporary are the employment of epsom salts, of castor oil and of ice bags.

COST OF MEDICAL CARE

It has been announced in the Journal of the Michigan State Medical Society that an extensive program is being carried out by specially appointed representative persons of various organizations concerned, to enquire into the problem of furnishing scientific medical care to the people at a price they can afford. The American Medical Association is helping out to the extent of sending questionnaires to each member of the medical profession, the purpose of which questionnaire is to ascertain the amount of the doctor's professional investment. These questionnaires will shortly reach the doctor and will take up the subject of the cost of his medical and premedical training and will make enquiries as to the cost of operating his business together with the amount of his net income.

It is hoped that every reader will cooperate to the extent of returning these questionnaires promptly and carefully filled out. The information contained is absolutely secret. The doctor is not asked to sign his name nor is there any mark or number to reveal his identity.

It is only by careful co-operation with this Committee on the Cost of Medical Care, this time through the American Medical Association, that we can hope to obtain information of any value to anyone. Do not neglect the questionnaire, fill it out carefully and return it promptly.

SCIENCE AND EXPERIENCE

(Manchester Guardian)

We hear so much rather vague lip-service to "science" that there is a distinctly crisp and tonic quality about the note of warning gently sounded

by that eminent champion of knowledge, Sir Arthur Keith. "It is true," he said, "that the highest form of science moves ahead of practice and guides its footsteps, but science often performs her best service not when she moves ahead, but when she follows in the trail of practice." He was thinking, it seems, particularly of medicine, and cited the case of cod liver oil, which was widely used and recommended long before later research proved that its virtues were due to vitamins. This is a case where practice was based upon results, and the function of science, after a very long period of successful practice, has been to explain why the results happen. It is true, of course, that for the purpose of comparing experience with research medicine offers the one field in which experience is bound to be able to put up a pretty good case for itself. Where matters of personal health are concerned the simplest of human beings can tell a hawk from a handsaw. People will not continue to take things that obviously do not agree with them, and if cod liver oil had not succeeded in strengthening the human frame all the vitamins in the world would not have recommended it to favor. In the same way, as Sir Arthur Keith pointed out, the virtues and excellence of sunshine were realized long before anyone knew anything about ultra-violet rays; it did not need a bio-chemist to teach mankind that a place in the sun was a desirable acquisition. Indeed, the art of healing is the one branch of knowledge which must perpetually keep in touch with common experience; even if science could evolve new medicines out of the blue and without reference to previous experience it would still have to test them on the inevitable patient and abide by that intensely pragmatic proceeding.

PLEASED WITH HIS RADIOGRAPH

A photograph's a lovely thing
For sweet sixteen to thirty-nine,
But Oh, the punishment they bring
To forty-plus, and this means mine!
But now I lift my head in pride
In flowing line and melting curve.
I stand a show with any bride,
My X-Ray photograph has verve!
The gall duct casts a rakish shade
Above a colon, barium-white,
The pattern of the lung is laid
In webs of grey, both dark and light.
I vertebrate with artless grace,
My humerus has no callous crooks,
Bi-cuspid bulbs adorn my face,
My knee-pan's right with all the books.
My oblongata shows esprit,
My cerebrum's extremely smart,
The silhouette looks twenty-three, . . .
My X-Ray is a work of art!

—Richard Denham in The
Saturday Review of Literature.

HARVEY AND HIS WORK

By the Editor.

"Cano librum virumque."

—With apologies to Virgil.

A celebration was arranged by the Royal College of Physicians in London on May 14, 1928, in honor of the publication of the *De Motu Cordis* when Sir John Rose Bradford referred to the event as the birthday of physiology and of scientific medicine. The speaker recalled the fact that

Harvey was physician of both King James I and Charles I, and that the latter supplied him with bodies of deer from the royal herds for his anatomical studies. The importance of this celebration may be realized when it is understood that seventeen European countries were represented with six delegates from the United States and six from the British dominions beyond the seas. Eulogies were pronounced by three prominent scientists, Sir Charles Sherrington, the eminent physiologist, Professor A. Chauffard of Paris and Professor Franz Kiebel of Berlin, a noted anatomist.

Sir Charles Sherrington* said in part: "That in William Harvey they bore in remembrance one who was Fellow, Censor, Treasurer, and, for a day, President-elect of the College, its benefactor by gift and bequest, and part and parcel of its



WILLIAM HARVEY, 1578-16.....

From the painting by Cornelius Janssen in the Royal College of Physicians of London.

pride and honor. Three and a half centuries had passed since its birth, and three since his unforgettable book. In science, as in letters, the book is of the man. Harvey's book embodied not only Harvey's thought, but what his hand had contrived, searched for, and found. At the Renaissance the spirit of man turned from an old order, cabined within a rounded scheme of things, to move and inhabit for itself afresh. The new day broke first on scholarship and letters; in science it adventured first among the stars. When it turned to explore the inward meaning of organ and organism, the living function, the Renaissance was William Harvey. . . . The work of Harvey, the spirit of it no less than the import, provides his eulogy and makes superfluous all other. His great discovery, aside from its intellectual worth, secured an item of knowledge than which no other single item has so served to grow,

* British Medical Journal.

as from a seed, medicine as we now know it. And it was the reassertion, the rebirth, of the method of experiment which, wedded to observation, had created the medicine—and the surgery—of the civilized world today. To engender medicine anew is engender a whole world of correlated knowledge; and an attendant world of beneficence no less. The circulation of the blood, the meaning of the heart, the light of a victorious method! May we not affirm that modern medicine does in fact start there? Harvey, founder of modern medicine! He would himself have felt no term can carry richer or lovelier praise from a grateful world."

The year 1928, then, is the tercentenary of one of the greatest events in the annals of medicine, the publication of Harvey's *De Motu Cordis*, in which was described for the first time the circulation of the blood. The significance of Harvey's great discovery cannot be over-estimated. John Hunter placed it in the same class as that of Columbus* and that of Copernicus, while Sir Thomas Brown considered it greater than either. It opened a new world in medicine. While Harvey may be said to be the founder of modern physiology, there was a marked hiatus between his discovery and further experimental physiology until the time of Haller (1708-1777).

INTELLECTUAL INDEPENDENCE NOT KNOWN

During the middle ages men thought and acted corporately, not as individuals; that is, the status of every man was fixed by his place in some body such as a guild, university, or monastery. Individual rights were practically unknown. No one could be said to have possessed the right to anything unless it were to Christian charity. The unit of society of the middle ages was the corporation, not the individual or nation. It was the age of guilds, monasteries, and later of universities. The Greeks, while they excelled in scholarship, had no universities or collections of scholars. They had higher education; their instruction in law, rhetoric or philosophy was of a very high order, but it was not organized into permanent institutions of learning. For this reason Greek learning had become practically extinct during the long period known as the dark ages. During the twelfth and thirteenth centuries occurred what historians named the first renaissance which manifested itself in the rise of universities so-called. The original university did not require great endowments. It bore very little resemblance to the modern institution of learning. The so-called universities were simply groups or collections of students which spread practically all over Europe. Trevelyan gives this description of the early "university": "It was located where scholars could lodge, half a dozen in a room; taverns where they could sit drinking, arguing, singing, quarelling; churches, which would be borrowed for university functions; rooms where the masters could lecture, each with some precious volume opened before him, while the students on the floor took notes and applauded or hissed him like a rowdy audience at a theatre." Not all students, however, were of this variety. Some cultivated learning on a "little oatmeal". To quote Chaucer's quaint portrait of the clerk of Oxenford:

*"For him was lever have at his beddes heed
Twenty bokes, clad in blak or reed,
Of Aristotle and his philosophye
Than robes riche, or fithele, or gay sautrye."*

ROGER BACON A LONE STAR

The chief study of the mediaeval university was a peculiar version of Aristotelian logic, the basis of education being grammar, rhetoric and logic, supplemented by arithmetic, geometry and astrology. The rhetoric and logic consisted in exercise in a sort of dialectic that, judging from results, was as futile as Omar Khayyam's experience in his student days:

*"Myself when young did eagerly frequent
Doctor and Saint, and heard great argument
About it and about; but evermore
Came out by the same door as in I went."*

The rise of universities constituted the first renaissance; the second came in the fifteenth century when it resulted in the overthrow of the whole mediaeval system. Coming before this second renaissance, however, one name should be mentioned, that of Roger Bacon, a Franciscan Friar whose genius shone like a star in the night. Roger Bacon, who lived from 1214 to 1294, has been called the father of experimental research. The most significant of his works is a dissertation on what he calls the four "offendicula" or causes of error which, according to him, were authority, custom, the opinion of the unskilled many, the concealment of real ignorance with the pretense of knowledge. He anticipated what we now call the method of science.

THE SCIENTIFIC METHOD

Science is not a body of organized knowledge as it has been defined. So soon as it becomes organized it is no longer science. To consider science a system of results embracing those facts and theories we call chemistry or biology, would seem to simplify our definition, but it would not be satisfactory. Dr. Charles Singer, the learned historian of science, defines science as the process which makes knowledge, or as "Knowledge in the making." It is the growing edge between the known and the unknown. The process of knowing is active and creative. Singer would not apply the name science in the strict sense to fields of completely organized knowledge which have ceased growing. We may realize that the number of real scientists is small. The number of teachers or interpreters of the results of scientific research, as well as those who make use of scientific knowledge, doctors and engineers, is much larger, and perhaps those in sympathy with the methods and aims of pure science are larger still. Let us hope. Science is something that is always changing. We have all realized this. The change is brought about as the result of greater experience and wider knowledge.

*"The old order changeth, yielding place to new;
And God fulfils himself in many ways,
Lest one good custom should corrupt the world."*

In this connection H. G. Wells, speaking of scientific men, says: "I do not mean that scientific men are, as a whole, a class of supermen, dealing with and thinking about everything in a way altogether better than the common run of humanity, but in their field they think and work with an intensity, an integrity, breadth, boldness,

* Realdo Colombo or Columbus (1516-1559) is said to have discovered the pulmonary circulation.

patience, thoroughness and faithfulness—excepting only a few artists—which puts their work out of all comparison with any other human activity. In these particular directions the human mind has achieved a new and higher quality of altitude and gesture, a veracity, a self-detachment, and self-abnegating vigor or criticism that tend to spread out and must ultimately spread out to every other affair.”

Such men as Roger Bacon and the subject of this paper belong to a long line of benefactors who constitute a “fifth estate”.* They belong to a class who make higher civilization possible.

THE AWAKENING

The renaissance of the fifteenth century, that transitional movement in Europe between the mediaeval and modern world, affected medicine and the sciences at a much later date than art and letters. It began with Petrarch and the humanists in the fourteenth century in Italy, where it became manifest in painting and sculpture. The movement was accelerated in the sixteenth century by the capture of Constantinople by the Turks in 1509, and the dispersion of its Greek scholars to the shores of Italy, which event opened anew the science and learning of the ancient world at an hour when the intellectual energy of middle ages had reached its ebb. It is significant to note that Florence, so long the abode of intellectual freedom and art, welcomed with extended arms the exiled Greek scholars. But we are more immediately concerned with the movement as it affected medicine and its allied studies. However much the new learning promoted literature and art, its influence was anything but favorable to the progress of science. Admiration for the literature of ancient Greece, while it engendered a love for poetry, history and philosophy, had a similar effect in promoting a spirit of veneration for the writings of Hippocrates, Ptolemy and Galen, so that it became almost an act of impiety to question their teachings. It was not until the sixteenth century, as we shall see, that the spell of ancient authority was broken by the direct appeal to nature. It was not until then that the anatomist determined at all cost to examine the human body for himself and to be guided by his own observations.

THE EVOLUTION OF ANATOMY

As anatomy precedes physiology, in order to adequately appreciate the work of Harvey, a brief account of the progress in anatomy is necessary. The great anatomist of antiquity was Galen (130-200 A. D.), who lived for a time at Pergamos and for five years at Rome. He was a man of talent both as observer and writer. His writings embodied all the important discoveries of his predecessors, enriched and much enlarged by the results of his own originality. His observations, however, were made upon the lower animals on the faith of which he expounded the human subject. Huxley declares that “No one can read Galen’s works without being impressed

with the marvelous extent and diversity of his knowledge and by his clear grasp of those experimental methods by which alone physiology can be advanced.” Rome was the field of his greatest triumph as physician. So great was his influence that for more than a thousand years his works held undisputed sway over anatomical teaching until a greater name arose in the person of Vesalius.



The Woodcut Portrait of ANDREAS VESALIUS in the First Edition of the *FABRICA*, 1543

Drawn by Jan Stephan van Calcar

(Reproduction from the copy in the Bibliotheque Royale de Belgique)

MADE ANATOMY WORKING SCIENCE

Vesalius (1514-1564), born in Brussels, inherited from an ancestry of learned men a keen appetite for scientific learning. He was the most commanding figure in European medicine after Galen and before Harvey. Vesalius was a pupil of Sylvius, a bigoted follower of Galen. The picture of Vesalius is well known standing by a table demonstrating the muscles of a partly dissected arm. His bearded face denotes a firm, independent character. His great service to anatomy consisted in making it a working science in which he made dissecting a respectable method of teaching. The great importance of his work lies also in the fact that he overthrew adherence to authority as a means of arriving at truth and employed instead, observation and reason. Slavish obedience to authority characterized the thought and methods of the dark ages. This was in accord with the ecclesiastical influence dominant during this long period. It was the influence of the theologian, which has, unfortunately, survived to our own day. The Scopes trial at Dayton, Tennessee, is too fresh in our memory to dispose us to feel we are in the present day and

* The “fifth” estate. Napoleon referred to the press as the fourth estate. The other three being the Sovereign, the Lords and the Commons. Napoleon is reported to have said that he preferred to have all the armies of Europe arrayed against him than one hostile newspaper. A writer in the *Atlantic Monthly* some time ago described what he called the “fifth” estate which included all those scientists, artists, philosophers and others who had made contributions of permanent value to human society. He estimated this “fifth” estate to comprise not more than one hundred thousand persons.

age entirely free from it. As the Scriptures were an infallible guide to spiritual truth, so the works of Galen were unfailing guides to scientific truth. Vesalius was bitterly opposed not only by the ecclesiastic forces, but by medical men of his time. The theologians opposed him because, among other things, he differed from the widely accepted dogma that man should have one less rib on one side because, according to Scripture, Eve was formed from one of Adam's ribs. Vesalius was willing, however, to leave the matter with the theologians, since it did not appear to him to be an anatomical question. Sir Michael Foster writes that Vesalius "Tried to do what others had done before him—he tried to believe Galen rather than his own eyes, but his eyes were too strong for him; and he cast Galen aside and taught only what he could see and what he could make his students see, too. Thus he brought into anatomy the new spirit of the time, and especially the young men of the time answered with a new voice." It is said that students flocked to his lectures, his audience amounting to some five hundred. The history of anatomy

precedes that of physiology as a logical sequence. The work of Vesalius placed the structure of the human body in a new light.

THE WORK OF HARVEY

William Harvey was the first man to study and proclaim the function of the structures which Vesalius had in such a masterly manner demonstrated.

"The work of Harvey," says Locy,* "was complementary to that of Vesalius and we may safely say that, taken together, the work of these two men laid the foundations of the modern method of investigating nature. . . . In what sense the observations of the two men were complimentary will be better understood when we remember that there are two aspects in which living organisms should always be considered in biological studies; the first, the structure, and then the use that the structures subserve."

* Biology and Its Makers, by Locy.

(TO BE CONTINUED)

NEWS AND ANNOUNCEMENTS

Thereby Forming Historical Records

Doctors R. A. Burke and W. S. Picotte have opened up a fifteen-bed hospital, to be known as the Twin City Hospital, at Negaumee, upper peninsula, Mich.

The November meeting of the Detroit Otolaryngological Society was held on Wednesday, the 21st. Dr. George McKenzie was the speaker of the evening. In December, Dr. W. V. Mullen of the Cleveland clinic is to read a paper before the society. It is further announced that the society will go to Toronto in January, 1929, as the guest of Dr. Perry Goldsmith. All of the meetings will be held in the Toronto general hospital, directed by Dr. Goldsmith and his associates.

Dr. George F. Buchan, Medical Officer of Health, Willesden, Urban District Council, England, spent November 16 and 17 in Detroit. Dr. Buchan is a well known public health official in England and is President of the Society of Medical Officers of Health of Great Britain. He is traveling through this country as a guest of the Commonwealth Fund of New York City. Dr. Buchan is also President of the Health and Clenallness Council of Great Britain.

Colonel J. D. Graham, Public Health Commissioner with the Government at India, was in Detroit as a guest of the Health Department from November 25-28, 1928. Colonel Graham was accompanied by Dr. Wells of the Rockefeller Foundation, under whose auspices, he is studying methods in public health and the correlation between teaching institutions and public health departments in various communities. Colonel Graham is the representative of India on the Health Committee of the League of Nations and Office Internationale, Paris. He is also chairman of the League of Nations Singapore Advisory Committee. He is also secretary of the Governing Body

of the Indian Research Fund Association, an important factor in Calcutta School of Tropical Medicine and Medical Research in India.

It is the custom of the Wayne County Medical Society, Detroit, Mich., to hold an entertainment on the fifth Tuesday of those months in which there are five Tuesdays. Accordingly, the evening of October 30th was devoted to a rather novel, but none the less delightfully entertaining program. The entertainment committee, under Chairman Dr. B. H. Larsson, made the event an historical evening when the members were treated to an interesting address on the "Life and Work of William Harvey," by Dr. Frederick Collar, Professor of Surgery of the University of Michigan. Dr. Collar's address was illustrated by numerous lantern slides. After the address, a film, shown for the first time on this side of the Atlantic, was presented, giving in detail Harvey's discovery of the circulation of the blood. The film began with the well known portrait of Harvey, in which the hands are in evidence. After showing the portrait, the body and face receded from the picture, leaving only the hands with the seventeenth century sleeves and cuffs turning the pages of Galen and other savants presenting results up to the time of Harvey. Then followed Harvey's experimentation by which he established knowledge of the circulation of the blood, thereby ushering in the era of modern medicine. The film was imported from England and presented to the society through the courtesy of the secretary of the American Medical Association.

AN ITALIAN COMMISSION VISITS THE DETROIT DEPARTMENT OF HEALTH

The Rockefeller Foundation is sending a commission of health authorities from Italy on a two months' tour of health organizations in the

United States. The commission is accompanied by Dr. L. W. Hackett, who is the representative of the Rockefeller Foundation in Italy.

They visited the Detroit Health Department on October 26th and 27th, and were particularly interested in the anti-tuberculosis work in Detroit. On October 28th they visited the State Department of Health at Lansing.

The commission consists of Professor Pietro Canalis, Professor of Hygiene at the University of Genoa, also a member of the superior council of the National Health Department; Dr. Alberto Missiroli, who is a provincial medical officer; Dr. Gino Vivaldi, bacteriologist of the National Health Department, and Mr. Giulio Zoppi, architect and engineer of the National Health Department.

On Friday evening, October 26, Dr. Henry F. Vaughan, Detroit Commissioner of Health, entertained the commission at the Detroit Athletic Club. Also attending this dinner were several representatives from the local Italian medical group, officers of the Wayne County Medical Society, and other representatives of the Detroit Department of Health.

CHILDREN'S HEART CLINIC

The third annual heart conference of the heart committee of the Tuberculosis and Health Society was held Friday, October 26th, in the auditorium of the Detroit Community Fund building. It was held jointly under the auspices of the committee and the heart committee of the Wayne County Medical Society.

The conference was designed for lay people, including nurses, social workers and other individuals who might be interested in the subject. The first conference of this nature was held three years ago. It was such a success that it has been held annually since that time.

This year the program was devoted entirely to the subject of heart disease in children. The attendance was about 200. This included not only nurses and welfare workers from different organizations, but a number of private individuals who had seen announcements of it in the papers. According to reports which have been received from individuals who attended, the program offered was very instructive and met the needs for which it was designed.

The program was as follows: "The Child's Heart and Its Diseases," by Charles A. Wilson, M. D., discussed by D. S. Brachman, M. D. "The Prevention of Rheumatic Fever and the Care of the Child Who Has It," by Janney Smith, M. D., discussed by Norman E. Clarke, M. D. "In the Scheme of Treatment of the Cardiac Child What Is the Place of (1) The Doctor?" by Ivor E. Reed, M. D.; (2) "The Parent?" by E. D. Spalding, M. D.; (3) "The Nurse or Social Worker?" by Miss Alice Walker, and (4), "The School?" by A. E. Olsen, M. D.

The program was arranged by Dr. Douglas Donald, chairman of the heart committee of the Tuberculosis and Health Society. Dr. Walter J. Wilson, a member of the board of the society, was the presiding officer.

The heart committee of the Wayne County Medical Society, Detroit, is composed of the following people: Dr. Douglas Donald, chairman;

Dr. E. D. Spalding, Dr. Norman E. Clarke, Dr. Walter J. Wilson, Dr. Charles A. Wilson, Mrs. George Hawley, Miss Alice Walker.

COMMUNICATIONS

Editor of The Journal:—

In reply to your inquiry of September 19th concerning the Physicians Health and Accident Insurance Company of Dallas, Texas, we desire to advise that this company is not authorized to do a health and accident insurance business in Michigan and we have no knowledge respecting them.

Any insurance placed with the company in question by a resident of this state is not enforceable in the Michigan courts.

Very truly yours,

H. B. Corell,
Deputy Commissioner.

DEATHS

Dr. M. V. Meddaugh of Detroit, died at his home, October 11th, at the age of 73. He had practiced in Detroit for over forty years. He graduated from the University at Valparaiso, Ind., and taught for a number of years at the Ferris Institute, Big Rapids, before coming to Detroit. He is survived by his widow, one son, R. H. Meddaugh, and a grandson.

SERUM TREATMENT FOR INFANTILE PARALYSIS PRONOUNCED SUCCESSFUL

Serum treatment in the early stages of the illness provides a definite cure for infantile paralysis with prevention of permanent deformity and paralysis. Dr. Wardner D. Ayer of Syracuse College of Medicine declared at the assembly at Atlanta, Georgia of the Interstate Post-Graduate Medical Association of North America. Dr. Ayer cited a series of 129 patients seen and treated by him, of whom 96 made complete recoveries, 25 developed paralysis and eight died.

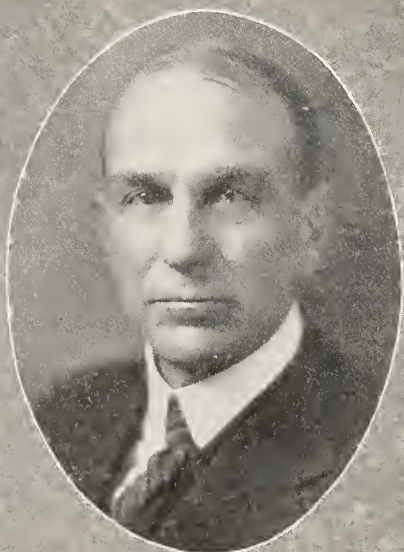
Of the eight who died, three received the serum too late and three did not receive enough. Dr. Ayer said, leaving only two cases as frank failures. Of the 25 that developed paralysis, ten were mild involvements that cleared entirely in six months. The serum used in the treatment was mainly that taken from the blood of patients who had recovered from the disease. In a few cases non-immune horse serum was used. It is given by hypodermic injection into the spinal canal.

The extreme importance of the early use of the serum was particularly emphasized by Dr. Ayer, who pointed out that there is a three-day period of illness before paralysis, and that the disease can be definitely determined in that period. The best results are obtained when treatment is started during the first 24 hours of the illness. The serum is practically useless after the paralytic stage has begun.—Science Service.

NOTE—In order to make this department interesting the co-operation of every member of the M. S. M. S. is solicited. Kindly send any item that may be of general interest. If it interests you it will interest others.—Editor.



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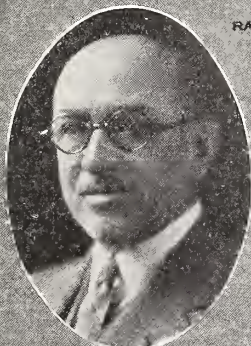
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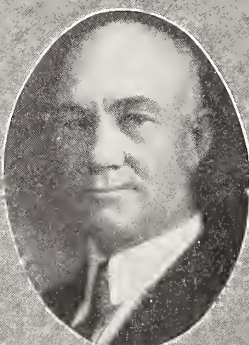
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JOHN PARSONS, SECRETARY

PEDIATRICS

COUNTY SOCIETY ACTIVITY

Revealing Achievements and Recording Service

EDITOR: Frederick C. Warnshuis, M. D.

Secretary Michigan State Medical Society

EXECUTIVE COMMITTEE MEETING

The October meeting of the Executive Committee was held in Grand Rapids on October 30, 1928, at 6:00 p. m. with the following present:

Chairman, R. C. Stone; J. D. Bruce, George Le Fevre, B. R. Corbus; president, L. J. Hirschman; secretary, F. C. Warnshuis.

1. Dr. Corbus recited the details surrounding his attendance at the conference on Crippled Children that was held in Lansing on October 4.

2. The Secretary presented the following letter:

"At a meeting of the Michigan Crippled Children Commission in Lansing October 5th, it was unanimously voted to invite the State Medical Society through the Council to designate two men to act as advisers and ex-officio members of the Commission.

"I think you understand fully, Dr. Warnshuis, that the Commission itself has nothing to do with the appointment of its members, and that the only way that we can invite those whom we very much desire to assist is on the above basis.

"With this understanding, we shall be very glad to have your Council act upon this request and designate whomever you may choose. Upon receipt of this advice they will be notified of the time and place of each meeting of the Commission.

"Yours very truly,

"(Signed) H. E. Van de Walker,
"Chairman."

3. Upon motion of Dr. Bruce, supported by Dr. Le Fevre, the Chairman appointed Dr. Jackson of Kalamazoo as one of the advisory members of the Crippled Children Commission. The Secretary was instructed to write the members of the orthopedic staff of the Crippled Children Commission requesting them to nominate one of their members as one of the members of the Advisory Committee and that such nomination be confirmed when received by the Secretary.

4. The Secretary reported upon the plans that have been instituted for the legislative campaign. Upon motion of Dr. Le Fevre-Corbus, the Chairman appointed Dr. Bruce, President Hirschman and the Secretary as a committee to wait on Governor Green and to report the result of

such conference at the next meeting of the Executive Committee.

5. The Secretary suggested that the Annual Meeting of the Council be combined with the Annual Conference of County Secretaries in January and that the meeting place be the headquarters of the American Medical Association in Chicago. The Secretary is instructed to ascertain the sentiment of the Council upon such a plan, and following the recording of their decision to then ascertain how many of the County Secretaries would attend such a conference at the American Medical Association headquarters and report his findings at the next Executive Committee meeting.

6. President Hirschman submitted his appointments for the several committees of the Society. These were discussed and approved by the Executive Committee and will be announced through an official communication from the President.

7. President Hirschman outlined some of the ideals that he had in mind to achieve during his term of office and discussed these with the members of the Executive Committee, who concurred in his plans.

8. On recommendation of President Hirschman it was moved by Le Fevre-Corbus, that the First Vice-President of the Society be invited to attend the monthly sessions of the Executive Committee. This is done in conformity with the plan of tying up closer to our organization work the Vice-Presidents of our Society.

9. On motion it was moved that the next Executive Committee meeting be held in Detroit on Friday evening, November 23rd at 6:00 p. m.

The Executive Committee adjourned at 10:00 p. m.

F. C. Warnshuis, Secretary.

REMARKS MADE BY DR. B. R. CORBUS AT LANSING
CONFERENCE ON THE CRIPPLED CHILDREN
LEGISLATION

Mr. Chairman, Ladies and Gentlemen:

I am here with a committee* from the Michigan State Medical Society, to consider

* Committee Members—Dr. Richard R. Smith, Dr. A. J. Bower, Dr. John Jackson.

with you certain problems connected with the detailed working out of the Crippled Children Legislative Act. We are here in response to your request. The Michigan State Medical Society desires you to know that it is in complete sympathy with this movement. We would be glad to make it a part of our educational program.

For the successful carrying out of this act—one of the most valuable and important projects that the state is behind—you are primarily dependent upon a very high grade of medical service, a type of professional service which is a highly specialized division of surgery. You have recognized this when, soon after the formation of the Commission, you arranged for the appointment of a group of men to handle your clinics, and limited this group to doctors who were orthopedic specialists—doctors who give up their entire time to this specialized division of surgery. You further recognized that you were, to some considerable extent, dependent upon the medical profession as a whole when you came before the Council of the State Medical Society, and this opportunity to meet with you today, under the authority of the House of Delegates of the State Medical Society, resulted from this meeting.

Perhaps one of the motives which caused you to come before us were certain criticisms leveled at the Commission's activities by doctors throughout the state. It may be that some of these criticisms were deserved from the professional standpoint, but often criticisms are due to a misconception of facts, and often abuses come into the activities of such an organization as this, unintentionally, by reason of the failure of laymen to get the professional viewpoint. Perhaps we can help you to avoid the pitfalls which lead to friction.

I have said that you are dependent upon the highest grade of professional service. You are also dependent upon the good will of the doctors of the state. There is rarely a family with a crippled child which has not a family doctor. If this family doctor is in favor of the work you are doing, the child will get to your clinic, the advice given will be accepted, and the treatment will be likely to be carried out. He, above all others, is the one to help you to get these children into the clinic. We have no quarrel with the idea that you should survey and comb the state for the crippled child, whatever his social status may be and whatever his economical status may be. I bring this up because there has been some misconception on the part of some members of the Commission as to the at-

titude of the State Medical Society. I have gone over this with Dr. LaFerte today. He is in agreement with this statement. We look upon it as a part of the educational process. We realize, as you realize, that there are people who are quite able to pay a reasonable fee and who would be willing to pay that fee if they but knew that their child could be helped. I like the word "survey" better than I like "clinic". It does not carry the idea of charity, and I do not mean to suggest that these clinic or survey days should not be free. The advice which the orthopedist gives to the parent of this crippled child, is professional service of the highest grade. The men of means should not take advantage of this free service, yet we feel that an economic distinction cannot be made on these clinic days and the greatest benefit be obtained by the group of crippled children who so need help. It does not seem to us practical to make a distinction. However, when it comes to the treatment of the case, those persons able to pay, should pay. Primarily these clinics are meant for the indigent children on the one hand and for the education of the public on the other hand.

So far as consistent with the proper treatment of the child, that child should be left in the hands of his family doctor. These cases are apt to be long cases. It is to the interest of the child to have the family doctor interested, and you may be sure that he will be glad to be guided by the advice given by the more largely experienced specialist. One of the marked criticisms that we have heard from the doctors throughout the state is that they have been ignored; that their patients have been taken from them; that little or no consideration has been given them in any way. This is bad business for everyone.

May I suggest that when you are ready to put on your clinic or survey in a community, the secretary of the State Medical Society be notified. Let him get in contact with the County Medical Society. Let the members of the County Medical Society be ready to help you find these crippled children so that when the day comes the family doctor who is going to treat these children may have the benefit of the advice of the specialist. The backing of the County Medical Society, and co-operation with the members of the society in the community, will do more to make this a success than anything you can do, and this co-operation will in itself solve a lot of problems which are now disturbing you and disturbing us.

We approve thoroughly, as I said before,

of the appointment of these very high grade men that form your group of orthopedists. We feel that a great deal of responsibility should be placed upon that group. It might be that it would be wise to have that group enlarged by men who are not limiting their work to orthopedics, but who are, notwithstanding that fact, competent orthopedic men. There probably are a few such men in the state. The group now formed is best able to judge the competency of these men and should have the right of appointment.

From the group of orthopedists there has come some criticism as to the assignment of men to your clinics. It seems to us that here again the responsibility for the assignment of men from this group should be left to the group themselves. They might well be guided by a request coming from the County Medical Society for a special man, or by a request from the Commission when the Commission felt the advisability of sending some special man to a certain community. It is felt by this group that geographical location should be taken into consideration. For example, that Dr. Hodgen should not be sent to Mt. Clemens, and Dr. LaFerte to Cadillac. Not only is this a waste of time and an extra expense to the state, but the custom results in a certain unfairness to the men on your staff.

These doctors have been giving their services at a very distinct sacrifice. You, of course, realize that the doctor cannot spend a day or two away from his office without it being a sacrifice. If properly arranged there might be some return in reputation and some return in an occasional pay case, but as it has been handled the returns have been nil.

Linked with these criticisms comes another criticism from the orthopedic group and with it a suggestion for its remedy. This criticism refers to the hospital. Dr. LaFerte said that whereas it is possible, under the law, to assign these cases to any hospital which has a recognized orthopedic service, as a matter of fact the commitment papers read—"University of Michigan", and it is necessary that "University of Michigan" be scratched out by the Probate Judge or his clerk, and the name of another hospital inserted. Because of a misunderstanding of the law, or because of the easiness of the operation, or what not, as a matter of fact these commitment papers are not changed as frequently as they should be.

The orthopedic group feels that it is to the interest of the crippled child, as well as

to the interest of the doctor holding the clinic, that these cases on which operative work has been advised, should, so far as possible, follow him to the well recognized hospital to which he is attached. If there is a geographical assignment of these cases, the assigned hospital will probably be the nearest hospital to that particular location. That is, if Dr. Hodgen of Grand Rapids, is holding a clinic in Cadillac, it is a reasonable thing to think that these patients should go into Blodgett Hospital at Grand Rapids, thereby saving traveling expense.

Mr. Martin has called my attention to the difficulty you have been having in getting men to go to the Upper Peninsula. That is asking a great deal of your doctor. The loss of time is so great. You must remember that these men are not only giving charity to the crippled children under the Legislative Act, but that they have their own charity group to look after at home, a not inconsiderable part of every orthopedist's practice, and in this instance there is absolutely no possibility of return other than the satisfaction of doing a good work. I might say that the State Medical Society also finds it difficult to get men to go into the Upper Peninsula to put on our Post-Graduate Clinics.

I want you to know that the State Medical Society is behind you. We are as interested in this work as you are. We welcome the opportunity to help you. We know that the doctors of the state will be behind you, provided that the details of your work are cleared up in a way that is fair to everybody. Naturally we want the whole plan carried out in an ethical manner. The doctors of the state will want to help you find the crippled children of the state. They will want to help you to make them well if it can be done. We think that the state should help those who cannot help themselves. We think that the individual who can pay his way, should pay, and where the state cannot pay and the patient cannot pay, the doctors stand ready, as always, to give their services.

You are laymen on this Commission, and try as hard as you will, it is difficult sometimes to get the doctor's standpoint, and so it would seem to me that this work might be helped a great deal if you could have on your Board a representative or two of the medical profession, who might help you in the solving of problems which are essentially medical. It will keep you from putting your foot in it inadvertently, and will make, I am sure, for more power to the Commission.

TRAVEL EXPENSE DEDUCTIBLE FROM YOUR
INCOME TAX

Anent our comment and urge that you become a Fellow of the American Medical Association we cite in the subsequent quoted statement a very personal reason and demonstration. By its efforts the A. M. A. has obtained a ruling on your deductible expenses in making income tax returns. It has thus saved you dollars. This and similar national activities should inspire your support. Become a Fellow!

Traveling expenses incurred by physicians in attending meetings of medical associations are deductible in the computation of their federal income taxes. The Commissioner of Internal Revenue has erred in denying the deductibility of such expenses. The Board of Tax Appeals made this decision, October 2, in passing on the appeal of Dr. Cecil M. Jack of Decatur, Ill.¹ The decision becomes final at the expiration of six months from its promulgation unless an appeal is taken to the courts before that time. The commissioner did not appeal, however, when the Board of Tax Appeals rendered similar decisions against him in favor of ministers² and of chemists,³ in cases identical in every essential circumstance with the present case. In those decisions the commissioner officially acquiesced, without waiting for six months to expire, and there seems to be no reason why he should follow a different course now. Acquiescence seems more probable, too, since the board, in promulgating its decision in the present case, cited as precedents the very cases in which the commissioner had acquiesced, and repudiated as a precedent a decision of the board⁴ by which the commissioner undertook to justify his course. In that case, the board pointed out, it was necessary for the board to uphold the commissioner's denial of the physician's claim of the right to deduct traveling expenses, because the physician had not submitted proofs of the amounts expended. The only discoverable result that would follow an appeal by the commissioner is added expense and trouble to the taxpayer and to the government, an additional case to clog the court calendar, and, pending a decision by the court, many thousands of payments unlawfully exacted of physicians under the guise of taxation, to be added to the tens of thousands of such payments already exacted, all of

which the government may be called on to refund.

Since the Commissioner of Internal Revenue first denied to physicians their right to deduct traveling expenses, in 1922, the medical profession has paid probably as much as a half million dollars into the treasury, to avoid unlawful demands by the commissioner, the distraint of property, and suits. Subject to certain limitations on the time within which claims for refunds must be filed, all of this money will be repayable to the physician who paid it, if the courts are not called on within six months to reverse the decision of the Board of Tax Appeals and if on appeal they sustain the decision of the board.

Applications for refunds may be filed without waiting for any further official action in the case. Claims for refunds for the tax years 1924 and 1925 must be made within four years from the date of payment; for the tax years 1926 and 1927, within three years; and for the tax year 1928, within two years. Unfortunately, in many individual cases the amounts repayable are probably so small that the physician will not feel justified in going to the trouble and expense of making a claim, and in many cases it will be difficult at this late date to produce adequate legal proof of the exact amounts paid for railroad fares, Pullman accommodations, hotel accommodations, meals, and other allowable expenses. Applications for refunds must be made on the special form provided for that purpose,⁵ copies of which can be obtained from the local collector of internal revenue. A separate application must be made for each year for which a refund is claimed. Every application must show that it is based on the decision of the Board of Tax Appeals in *Jack v. Commissioner of Internal Revenue*.⁶ Applications must be filed with the collector of internal revenue within whose district the refundable money was paid.

5. Internal Revenue Service, Form 843.

6. Appeal of Cecil M. Jack, Docket numbers 14995 and 17662, promulgated, Oct. 2, 1928.

Annual Meeting—If you failed to read all the minutes of our Annual Meeting as published in the November issue, do so now. There is much of intense interest contained in that issue. We would appreciate your comments.

A. M. A. MEMBERSHIP-FELLOWSHIP

There is still evident considerable confusion relative to *Membership* and *Fellowship* in the American Medical Association.

In our scheme of organization a member

1. Appeal of Cecil M. Jack, B. T. A. ; Docket numbers 14995 and 17662, decided, Oct. 2, 1928.

2. Appeal of Marion D. Shutter, 2 B. T. A. 23.

3. Appeal of Alexander Silverman, 6 B. T. A. 1328.

4. Appeal of Everett S. Lain, 3 B. T. A. 1157.

of the County Society becomes a member of the State Society, and the American Medical Association but *not* a *Fellow* of the American Medical Association. Not one cent of his dues goes to the A. M. A.

To become a *Fellow* of the A. M. A., he must make *special* application and pay to the American Medical Association the annual dues of five dollars.

The American Medical Association is your parent national organization. Every member of the County and State Society *should become a Fellow of the A. M. A.* Why?

Because your parent national organization conserves your interests in national medical affairs. To enumerate these features in detail would require an entire issue of *The Journal*. We cite a few. The A. M. A. Council on Investigation exposes quacks, frauds and nostrums, and warns the public—to your interest. The Council on Medical Education and Hospitals inspires medical education standards, exposes pseudo-colleges, classifies hospitals and standards for interne service. The Bureau on Legal Medicine and Legislation conserves your interests in national legislative matters and national legal problems. During the past few months it has saved for doctors annual income tax reduction to pay your A. M. A. dues for five years. It also reduced your Harrison Registration tax \$2.00 per year by arguing your case before the Revenue Department. The Council on Pharmacy and Chemistry and the Council on Physio-Therapy annually accomplishes important work for your professional and financial benefit. And so

along every avenue, we can cite instance after instance wherein you personally benefit. By becoming a Fellow you will also receive *weekly* the *Journal of the A. M. A.*, than which there is no better medical journal. The *A. M. A. Journal* is in itself worth more than your A. M. A. dues.

We ask—do you not owe, in return for these and many other personal returns, your personal support? Are you willing to accept these benefits without demonstrating your appreciation? Are these not worth \$5.00 per year to you?

Our State Society has 3,366 members. Of our members but 2,073 are Fellows of the A. M. A. What about you who are one of the 1,293 members who fail to record appreciation for the work the A. M. A. does for you?

Some of our members pay \$5.00 per year for their subscription to the *Journal of the A. M. A.* but who are *not* Fellows because they have never applied for Fellowship. If you are one of this class we urge you to fill out an application—you will still continue to receive the A. M. A. Journal.

Michigan owes 100 per cent support to the American Medical Association. Will not you 1,293 members of our State Society who are *not* Fellows, enable us to register such support and loyalty by filling out the application blank on this page?

Send your application and check for \$5.00 today for 1929, to Dr. Olin West, Secretary, 535 N. Dearborn St., Chicago, Ill. Your return benefits will be one hundred fold. Certainly you want to support our A. M. A. for what it does for you.

AMERICAN MEDICAL ASSOCIATION

Application for Fellowship

535 North Dearborn Street, CHICAGO

....., 192

I hereby make application for Fellowship in the AMERICAN MEDICAL ASSOCIATION and subscribe for THE JOURNAL for one year from date. I am a member in good standing of the.....County Medical Society, a component branch of the.....State Medical Association.

N.B.—Five dollars is deposited with this application, of which amount, should I be granted the Fellowship applied for, \$4.00 is to be credited to my subscription for THE JOURNAL. The Fellowship for which this application is made is to be subject to the Constitution and By-Laws of the American Medical Association.

Signed.....
(Name in full)

Street..... City.....

County..... State.....

Qualifications for Fellowship—The members in good standing of the constituent state and territorial medical associations of the American Medical Association shall be members.
Any (1) member of this Association, who on the prescribed form, (2) shall apply for Fellowship and subscribe for *The Journal*, (3) paying the annual dues for the current year, shall be a Fellow.

COMMITTEE APPOINTMENTS

President Hirschman announces the following committee appointments for the coming year. It is the earnest desire of our President that these committees become aggressively active. Each committee is charged with a definite duty. To discharge that duty is the personal obligation of each committeeman.

Joint Committee on Public Health Education—

Angus McLean, Detroit.
L. F. Foster, Bay City.
J. B. Jackson, Kalamazoo.
F. C. Warnshuis, Grand Rapids.
A. P. Biddle, Detroit.

Medical Education—

A. P. Biddle, Chairman, Detroit.
Hugh Cabot, Ann Arbor.
W. H. MacCracken, Detroit.

Hospital Survey—

C. M. Williams, Chairman, Alpena.
C. E. Boys, Kalamazoo.
A. M. Campbell, Grand Rapids.
Warren L. Babcock, Detroit.
H. A. Haynes, Ann Arbor.

Public Health—

J. H. Charters, Chairman, Detroit.
W. E. Ellet, Benton Harbor.
C. S. Gorsline, Battle Creek.
J. Wessinger, Ann Arbor.

Legislation and Public Policy—

William E. McNamara, Chairman, Lansing.
Frank Kelly, Detroit.
Arthur M. Hume, Owosso.
W. McCutcheon, Cassopolis.
Earl Carr, Lansing.

Tuberculosis—

B. A. Shepard, Chairman, Kalamazoo.
E. N. Nesbitt, Grand Rapids.
B. H. Douglas, Northville.
E. J. O'Brien, Detroit.
F. H. Bartlett, Muskegon.

Venereal Prophylaxis—

W. F. Martin, Chairman, Battle Creek.
H. W. Plaggemeyer, Detroit.
U. J. Wile, Ann Arbor.

Civic and Industrial Relations—

Harrison S. Collisi, Chairman, Grand Rapids.
L. A. Farnham, Pontiac.
C. D. Munro, Jackson.
L. O. Gieb, Detroit.
H. M. Joy, Calumet.
F. G. Swartz, Traverse City.
R. H. Nichols, Holland.
W. Den Bleyker, Kalamazoo.
H. F. Dibble, Detroit.
G. M. Curry, Flint.

Medical History—

C. B. Burr, Chairman, Flint.
J. H. Dempster, Detroit.
W. J. Kay, Lapeer.
W. H. Sawyer, Hillsdale.
Walter H. Winchester, Flint.

ORGANIZATION AND CONDUCTING OF CLINICS FOR CRIPPLED CHILDREN

For the past ten years the Rotary Clubs of Michigan have taken an active interest in the problem of the crippled child. Sometimes a club and sometimes individual members of the club write to the Michigan Crippled Children's Commission asking for a clinic for the crippled children of their county.

Since the organization of the Michigan Society for Crippled Children, a philanthropic group of people interested in the betterment of the children, and in consequence, the betterment of their community, thirty-three county chapters of this society have been formed. These county chapter people write us for information regarding clinics.

The Commission is powerless to organize the clinics required by law without the aid of much local assistance. These two groups form the basis of local activities.

Their first instructions call for consultations with the local doctors and nurses. This is done because we want the local doctors, particularly, to feel that our services are for their assistance and are not an interference. It has sometimes happened that local people have not realized the necessity for interviewing the local doctors and obtaining their support before making any further moves. This is regrettable and not at all the policy of the Commission. The law requires a clinic annually in each of the several counties or groups of counties in the state. This is not humanly possible with our present staff of workers and the prevailing unorganized state of affairs.

To date 23 clinics have been held and 1,087 children examined. This means an enormous amount of work and the Commission endeavors to do all things possible for the good of these children. The matter of follow-up work by the two registered nurses on the Commission staff will be handled in connection with the hospitalization article which will appear at a later date.

It is the desire of the Commission that local doctors feel that clinics for crippled children will be of welcome assistance to their communities. In many cities throughout the state the county branch of the State Medical Society has backed the movement with a very fine spirit of co-operation. Local doctors have taken turns at conducting examinations simultaneously of cases which present themselves on the day of the clinic and which are not strictly orthopedic cases. Doctors are wel-

come to bring their patients for consultation with the orthopedic specialist. Lunches and dinners have been given honoring the visiting orthopedic surgeon. Every effort is made to demonstrate to the doctors living in the community that the sole aim of the Michigan Crippled Children's Commission is to locate the crippled children of the state and prevail upon them to avail themselves of the great advantages of modern medical science and surgery.

The question is often asked as to the manner in which the list of examining orthopedic surgeons was compiled. At the time the Commission opened its offices, November 1, 1927, the Michigan Society for Crippled Children gave access to its files and records. Among these was a list of eight surgeons as used by them in past years. The Commission submitted this list of names to the surgeons themselves, together with an inquiry as to the names of any other surgeons who specialize in orthopedic. Two more names were immediately added to the list by them. Later another name was added and today the list contains the names of eleven orthopedic specialists. The name of any surgeon specializing in orthopedics, presented by a member of the group, vouched for by three other members of the group, and then voted upon, will be accepted for this list and recognized by the Commission as a clinic examiner.

The people living in a community are given the list of names of surgeons. They indicate a first and a second choice for the examiner at the clinic in their county. These men are invited to examine at the clinic. They serve without compensation but are given their actual traveling expenses.

The clinics are purely diagnostic. The surgeon recommends what, if anything, in his opinion, can be done for the child. The stenographic notes are typed in the office following the clinic. They show the history of the case, any treatment received, the diagnosis and recommendations of the examining surgeon. The original copy of this report is filed in the Commission office, one copy is given to the examining surgeon, one to the county school commissioner or city superintendent of schools as provided by the law, and another is given to the county nurse or local person in charge of the clinic.

The information given by parents at the clinic constitutes our basis upon which to proceed. Often we find that they have no family physician, upon investigation

we find that the doctor named by them has been called recently for some slight disorder but has never been called upon to treat an orthopedic condition which has continued over a period of years. Often a doctor is named by the family as their family physician and it develops later that he has not been called upon for several years and so is not at all familiar with the present ailment. We state this in order to show that records, if we attempted to send them to the so-called family physician, would frequently be meaningless to them because of the fact that they are not in a position to know the family due to not having been called into consultation. In a great many instances, where we are certain as to the connection of the local physician with the case, we have been pleased to send the reports directly to him and wish to do so in every case. The records are open to all, copies will be furnished to those desiring them, but we do not like to send them out promiscuously unless certain that the physician desires to have a copy. It has seemed better to us to ask the follow-up worker to interview the family after the clinic, ascertain in a more leisurely manner than is possible during the rush of a clinic just who has been attending the child, and then pay a personal call on such physician asking his advice as to the follow-out of the recommendations made by the examining surgeon.

Esther Martin, Secretary-Treasurer.

Annual Dues—With the close of the year your annual dues become payable. Please remit promptly to your County Secretary.

Pictures—This issue contains the pictures of our officers. They are printed for historical record as well as to more intimately acquaint you with fellow members in whom you have reposed trust.

Greetings—Our cordial Holiday Greetings are extended to each member. Our wish is for a full measure of happiness and well-being. May the new year bring to you an abundance of joyous hours and prosperous days.

Council and Secretary's Conference—Plans are being made to hold the Mid-Winter Session of the Council and the Annual Conference of County Secretaries at the American Medical Association Headquarters in Chicago. The tentative dates are January 16 and 17. It is felt that such a meeting place will afford our members

an insight as to the scope and extent of work our national organization is accomplishing for the individual doctor. Full details will be announced in the January Journal.

Proselyting—That is a gentler caption than the real word that should apply * * * We refer to vicarious words and actions employed by a few in every community who stoop to inducing patients to desert their customary medical attendant. Some do it by "grand standing", others by comparative braggadocio, and others by baser methods, actual or suggestive. The one end being to acquire the patient and then to farm them for all they can obtain in money.

The scenes may be varied; the club, golf course, party, bridge game or social channels. But the most flagrant location is the hospital corridor or ward—especially the hospital ward containing patients of several attending men. The crooked culprit goes to the bedside of his own patient and in mannerism, loud voiced self laudation and self deification tells or recites incidents of his wonderful cases and cures alleged. This to impress the patients of other doctors in adjacent beds. A daily repetition of such practices week in and week out results in a fair batting average during the year of stolen cases—for there are always a few who fall.

No words are ample to convey the contempt such a crook merits. The wonder is that he is permitted to pursue such a course in our hospitals. He merits dismissal as well as denial of all hospital privileges—a veritable ex-communication. Kick him out and clean your hospital of the proselyter—the crook within our ranks.

GRATIOT-ISABELLA-CLARE COUNTY

The G. I. C. held their November meeting in the Park House, St. Louis, Thursday, November 8th. Seventeen had supper together at 6:30, after which President Barstow introduced Dr. Willard Smith from the Medical Department of the University Hospital, who read a paper on "Rheumatoid Disease." The doctor covered the subject thoroughly in his paper and then explained different ways they have been treating those afflicted with this disease in the University Hospital.

—E. M. Highfield, Secretary.

SHIAWASSEE COUNTY

Shiawassee County Medical Society began its November meeting with a noon luncheon at which thirty-one doctors sat down together. After a satisfying repast the Society adjourned to the auditorium of the nurses' residence of Memorial Hospital where they were addressed by Dr. Har-

ris Sturgis of Ann Arbor on "Some Phases of Heart Disease"; Dr. Keeler, also of Ann Arbor on "Acute Affections of the Throat"; Dr. Chas. S. Kennedy of Detroit on "Fractures of the Skull and Spine", and Dr. Clyde Hasley of Grace Hospital, Detroit, on "Eczema and Other Skin Diseases."

Dr. Kennedy and Dr. Hasley illustrated their subjects with the stereopticon, and all four speakers were very entertaining and instructive.

—W. E. Ward, Secretary.

LIVINGSTON COUNTY

The first regular meeting of the Livingston County Medical Society was held in McPherson Hospital at Howell, October 30th.

Dr. W. J. Cassidy of Detroit was present and gave an interesting clinic; in the afternoon operating two thyroid cases under local anaesthetic for the benefit of the members.

The doctors were guests of the hospital at a very pleasing dinner after which Dr. Cassidy gave an illustrated lecture on "Surgical Thyroids". Discussion by Dr. Claude Sigler and Dr. Hollis Sigler followed.

The character of the clinic and the attendance were very good; indicating a very successful life for the Society in this county.

The next monthly meeting will be held at the State Sanatorium for Tuberculosis where the doctors will be the guests of Dr. Huntley and attend a clinic conducted by Dr. John Alexander of Ann Arbor.

—L. A. Davis, Secretary.

MUSKEGON COUNTY

The Muskegon County Medical Society met for dinner at the Occidental Hotel at 7 p. m., October 26. Twenty-six members were present. President Bloom called the meeting to order at 8 p. m. The minutes of the previous meeting were read and approved.

A communication from the Y. M. C. A. was read asking the County Medical Society to provide speakers for health lectures during the coming winter.

A communication was read from the State Society Secretary asking for the appointment of a legislative committee. The appointment of the legislative committee was deferred by the president for later consideration.

A communication was read from the Hackley Hospital Free Bed Auxiliary referring to the Society the question of the best means of using available money for free beds. The Society moved to inform the Auxiliary that the Society believes that a chairman should be appointed by the Auxiliary to whom physicians desiring free beds for patients could apply directly.

Dr. O. P. Kimball, of Cleveland, Ohio, gave a very instructive and interesting talk, illustrated with lantern slides, on his work in the prevention of goitre among school children. The meeting adjourned at 11 p. m.

Louis LeFevre, Secretary.

JACKSON COUNTY

The Post-Graduate Conference held in Jackson October 24th at the Hotel Hayes was a distinct success. The program was as follows:

9:30 a. m.—"Common Rectal Conditions," by Edward G. Martin, M. D., Detroit.

10:00 a. m.—"Correction of Deformities," by Alfred D. LaFerte, M. D., Detroit.

10:30 a. m.—“Focal Infections,” by Edward G. Martin, M. D., Detroit.

11:00 a. m.—“Diagnosis of Glaucoma,” by A. E. Bulson, M. D., Fort Wayne.

11:30 a. m.—“Blood Examinations,” by H. E. Cope, M. D., Detroit.

12:15 p. m.—Luncheon.

1:30 p. m.—“Arthritis,” by Philip Kruscher, M. D., Chicago.

2:00 p. m.—“Gynecology,” by Channing W. Barrett, M. D., Chicago.

2:30 p. m.—“Bacterial Endocarditis,” by Joseph A. Capps, M. D., Chicago.

3:00 p. m.—“Drainage of Accessory Sinuses,” by A. E. Bulson, M. D., Fort Wayne.

3:30 p. m.—“Gynecology,” by Channing W. Barrett, M. D., Chicago.

4:00 p. m.—“Backache,” by Philip Kruscher, M. D., Chicago.

4:30 p. m.—“Pain in Pericarditis,” by Joseph A. Capps, M. D., Chicago.

7:00 p. m.—Dinner. Address, “Relationship of the Doctor to Law and His Patient,” by Herbert V. Barbour, LL.D., Detroit.

In the evening a banquet was held in the Georgian Room. The speaker, Mr. Herbert Barbour of Detroit gave a very interesting discussion on the “Malpractice Phase of Medicine,” citing much of the humorous side of it.

Total attendance at the Clinic was about 125.

—Philip Riley, Secretary.

BERRIEN COUNTY

The Berrien County Medical Society held their October meeting at the Four Flags hotel in Niles.

An excellent turkey dinner was served in one of the private dining rooms to 30 members. The table was decorated for the Hallowe'en season.

At the business meeting following the dinner the application of Dr. W. O. Jennings of Benton Harbor was received back from the membership committee and he was voted into the society.

The letter from the secretary of the state society in regards to the legislative committee was read.

The delegates' report of the state meeting in Detroit was read by the secretary.

A vote of appreciation and thanks was passed by the society to the chambers of commerce of Benton Harbor and St. Joseph for their interest and work in aiding the Berrien County Society in their attempt to obtain the 1929 state meeting; also to the various luncheon clubs for their telegrams of joint invitation.

The society then listened to a wonderful paper on the heart by Dr. M. A. Mortensen of the Battle Creek Sanitarium.

Dr. Mortensen's paper dealt particularly with the differential diagnosis of coronary sclerosis and coronary thrombosis.

His outline method, by means of slides and his case history illustrations made his subject most interesting and specific in description, so that one was bound to maintain interest and remember the salient points of differential diagnosis in the subject under discussion.

In the discussion that followed other points of interest apart from the paper, but allied, such as hypertension, dietetic and medical treatment, were brought up and ably answered by Dr. Mortensen.

Such papers are of real value to the general

practitioner as well as the specialist, and the Berrien Society is deeply indebted to Dr. Mortensen for the clarity of his delivery and the sacrifice of time necessary to be with us.

The November meeting will be held in Benton Harbor on the 21st and will be addressed by Dr. Ferris Smith of Grand Rapids. The dental society have been invited as guests for this meeting.

W. C. Ellet, Secretary.

GENESEE COUNTY

On Wednesday evening, October 24, the Merliss Brown Auditorium of Hurley Hospital was officially dedicated and turned over to the Genesee County Medical Society. The auditorium is built as an integral part of the hospital. Architecturally it conforms to the regular theater style with a suitable stage for speakers and a seating capacity of three hundred. The acoustics are exceptionally good. Very infrequently does one find such perfect ventilation, the air remaining clear and fresh. The decorations are subdued and in excellent taste. The side walls are paneled in antique oak for a height of about eight feet, above this the walls are stippled in a warm brown, overhead the ceiling is beamed and richly decorated with a conventional design done in blue, red and gold. The lighting fixtures are very decorative and unique, in that ample light has been provided without glare. Comfortable upholstered seats have been purchased with funds raised by voluntary subscriptions from members of the County Medical Society.

An auditorium such as this constituting a unit of a city hospital is rather unique, and is the only one of its kind in the state. Visitors during the recent Post-Graduate conference at Flint were enthusiastic in their praises and Genesee County Medical Society may be very proud indeed of its new acquisition.

In accepting this gift from the Board of Hospital Managers and through them the citizens of Flint, the Society assumes a moral obligation to make use of this splendid equipment in disseminating medical knowledge. The taxpayers will, we hope, quite fittingly benefit by receiving improved medical care.

J. P. Pengelly as representative of the Citizens of Flint introduced Merliss Brown, member of the Board of Hospital Managers, after whom the auditorium was named. Mr. Brown in an appropriate manner turned the auditorium over to the Medical Society. Dr. W. H. Winchester in his usually charming way expressed the appreciation of the physicians to the board and the citizens of Flint. A short talk was given by Dr. F. C. Warnshuis of Grand Rapids on “Organized Medicine.” Following this Dr. J. D. Bruce of Ann Arbor told of the effort being made to place Post-Graduate education on a suitable footing in Michigan. Our honored guest, Dr. M. L. Harris of Chicago, President-elect of the A. M. A., spoke on, “Doctors, Patients and the Community.”

On October 24 and 25, at the New Merliss Brown Auditorium at Hurley Hospital at Flint was held a medical and surgical conference and clinic. Attendance each day was about one hundred. The subjects discussed were all very well received and appreciated by those in attendance. All felt that the bringing of these conferences is a big step forward in post-graduate work and as they are more appreciated by the medical profession, the attendance will increase. Men could spend much time and at greater expense visiting

clinics hundreds of miles away and not receive the valuable information given by these papers.

—Henry Cook, Secretary.

MONROE COUNTY

It was impossible to answer your letter regarding legislative committee before, because the society did not meet until last night. Committee is A. W. Karch, chairman; Jas. Humphrey, W. F. Acher, M. A. Hunter, all of Monroe.

There is at present no women's auxiliary. Probably the new president will take up the organization of one.

Officers elected at October 18 meeting are:

President, T. M. Moll, Monroe; vice president, F. J. Heffernan, Carleton; secretary-treasurer, Florence Ames, Monroe; delegate, S. J. Rubley, Monroe; alternate, M. A. Hunter, Monroe.

There was an excellent address by Dr. Alpheus Jennings, Detroit, on "Diagnosis of hyperthyroidism, with Case Reports." Twenty-four members were in attendance. This was the thirty-third annual meeting of the society. Four of the original members were present: Geo. B. McCallum, Monroe; L. C. Knapp, Monroe; S. V. Dusseau, Erie, and E. S. Cornwell, LaSalle.

Dr. S. J. Rubley, of Monroe, is at present confined to St. Vincent's Hospital, Toledo, recovering from a hemorrhage due to duodenal ulcer. He is recovering nicely.

Florence Ames, Secretary.

GRAND TRAVERSE-LEELANAU COUNTY

Regular meeting of the Grand Traverse-Leelanau County Medical Society was held at the J. D. Munson Hospital October 2, 1928.

The following members were present: Drs. Rinear, Holdsworth, Gauntlett, Kyseka, Holliday, Swartz, Swanton, Minor, Brownson, Inch, Thirlby, Lawton, Murphy, Sladek; and as guests, Drs. Sheets, Berghoff and Minas.

Miss Mildred Compton, the city school nurse, gave a report on school health work covering a period of three years, and suggested that a committee be appointed with whom the school nurse can confer on any problems that are brought up. Sladek moved that such committee be appointed; seconded by Kyseka. Motion carried.

President Rinear appointed Drs. Lawton, Holdsworth and Thirlby on the above committee.

The report of Dr. E. F. Sladek, the delegate to the 108th annual meeting of our State Society, was read by him and was accepted. He divided his report into two parts; the work of the House of Delegates, and those scientific meetings which he attended.

A card from the family of Dr. O. E. Chase, who died recently in Chicago, gratefully acknowledging our expression of sympathy was read.

Dr. Frank Holdsworth concluded the evening with a very interesting talk, illustrated by lantern slides and projected photographs, on the history and the present condition of the Trudeau Sanitarium at Saranac Lake.

Special meeting, October 19, 1928.

Dr. L. M. Coulter of the State Department of Health presented a new plan for a County Health Unit in this region, and asked us to reconsider our previous action in this matter.

Dr. E. B. Minor made a motion that we en-

dorse a County Health Unit for Grand Traverse, Leelanau and Benzie counties. After considerable discussion he withdrew his motion because of lack of representation of all counties involved, and the fewness of members present.

A Clinical meeting of the Grand Traverse-Leelanau County Medical Society was held at the J. D. Munson Hospital on the afternoon and evening of October 30, 1928.

Program

2:30-3:00—Skin Clinic, Dr. Noah E. Aronstam, Detroit.

3:00-5:30—Surgical Clinic, Dr. Chas. B. Lakoff, Detroit.

6:00—Banquet at the Country Club.

7:30—Meeting of the Grand Traverse-Leelanau County Medical Society. "Tuberculides," illustrated by lantern slides, Dr. Noah E. Aronstam.

Dr. Aronstam presented 29 very instructive cases of various skin disorders, while Dr. Lakoff gave many practical surgical demonstrations.

Dr. Edwin Rinear presided over the evening meeting at which the following members were present: Drs. Rinear, Way, Minor, Inch, Gauntlett, Murphy, Holdsworth, Kernkamp, Brownson, Holliday, Kyseka, Smieseth, Sladek, and as guests, Drs. Aronstam, Lakoff, Freemont, Smith, Minas, Sheets and Berghoff.

Dr. Rinear appointed on the Legislative Committee, Doctors F. G. Swartz, Traverse City, chairman; E. F. Sladek, Traverse City, and Fred Murphy, Cedar. He also suggested that Mrs. F. P. Lawton be asked to form a Women's Auxiliary.

Dr. Aronstam then presented his paper "Tuberculides," which brought out considerable discussion.

The attempt to make this meeting one of a very practical nature was fully realized and the members of the local society and their guests voted it one of the best meetings we have had for years.

E. F. Sladek, Secretary.

KENT COUNTY

The summer activities of the Kent County Medical Society, consisting of picnics and golf tournaments, were brought to a close September 19, 1928, with the resumption of our regular schedule of scientific and business meetings. Following the business session, Dr. H. C. Robinson of Grand Rapids, Michigan, presented a paper entitled "Management of the Arthritic." This paper, well given, provoked an unusual amount of interesting discussion. The second paper of the evening, "The Interpretation of X-Ray Dental Films," by Dr. V. H. Eman, also of Grand Rapids, followed naturally the trend of thought of the first paper, and was excellently done.

The meeting of October 10, 1928, was featured by a paper given by Dr. Carl Snapp, entitled "The Problem of the Hard of Hearing." Dr. Snapp's splendid paper was followed by a very interesting and practical demonstration of the problem presented by pupils from the various classes from the school for the deaf.

At a special meeting held October 17, the Society listened to the plea of Mr. Gerald Wagner, consulting engineer for the city planning department, in the interest of the proposed new sewage disposal plant for Grand Rapids, and the proposed plan for its operation as a utility.

The scientific activities of the autumnal season received great impetus October 23 and 24,

when a two-day post-graduate conference, arranged by the Michigan State Medical Society and the Department of Post-Graduate Medicine of the University of Michigan, was put on. The morning sessions, held at Blodgett, Butterworth and St. Mary's hospitals, consisted of Surgical and Medical clinics covering a wide range of subjects and given by members of the hospital staffs. These morning sessions, which were followed by complimentary luncheons at the hospitals, had an average attendance of some thirty-five to forty men, a considerable number of whom were attracted from the surrounding territory. The afternoon sessions, held at the Pantlind hotel, consisted of short twenty-minute talks by men of national prominence in their respective fields. Such men as M. A. Mortensen of Battle Creek, Frank Smithies of Chicago, B. C. Corbus of Chicago, J. P. Greenhill of Dr. De Lee's Clinic, Chicago, J. D. Bruce of Ann Arbor, Guy L. Kiefer of Lansing, T. E. Jones of Cleveland, Carl D. Camp of Ann Arbor and Wilbur E. Post of Chicago, having prominent places on the program. The papers of these men, intensely interesting, short and peppy, illustrated with moving pictures and lantern slides, were heard by members of the Medical Profession from all of Western Michigan, the attendance averaging 120 and testifying to the interest aroused, and the popularity of this type of Clinic. The evening of October 23 was given over to a subscription dinner at the Pantlind Hotel, one hundred and forty physicians being in attendance. Dr. B. R. Corbus of Grand Rapids, presiding as toastmaster, presented Dr. H. S. Collisi, President of the Kent County Medical Society, who briefly spoke on the activities of our local county organization, and expressed his gratitude and that of our society for being favored with such a splendid program. Dr. F. C. Warnshuis, having as his topic "Organizational Achievements," dwelt at length upon the progress made and being made by the State Society in providing post-graduate instruction, and outlined the incalculable advantages of membership in the county, state and parent organization, The American Medical Association. Dr. J. D. Bruce of Ann Arbor, in a very splendid paper, reviewed the whole problem of medical education, and outlined the advantages of the Preceptor System in the practical training of young medical students, a system which is now in vogue at the University of Wisconsin. Dr. M. L. Harris, President-elect of the American Medical Association, climaxed the evening's entertainment with a remarkable paper entitled, "Doctors, Patients and the Community." This paper, one that could only be written by a practitioner of many years' experience such as his, and only after much study and investigation, was well received.

The Kent County Medical Society is deeply indebted to the State Medical Society for this conference, and desires to express its appreciation through the columns of the Journal.

John M. Whalen, Secretary-Treasurer.

SAINT CLAIR COUNTY

A regular meeting of this Society was held at the Saint Clair Inn, Saint Clair, Michigan, Thursday, October 18, 1928.

Supper was served to ten members and four guests at 6:30 p. m. and a social hour followed. The meeting was called to order at 8:25 p. m. with the following members and guests present: Doctors Smith, Carney, McColl, Battley, Vro-

man, Webster, Waltz, Heavenrich, Bowden, Treadgold, LaRue and Kel. As guests: Doctors J. B. Porter of Port Huron, Kenneth Dick of Carsonville, P. E. Martin of Imlay City and Wadsworth Warren of Algonac.

Several communications were read by the secretary and after discussion the following committees were appointed by President Reginald Smith: Legislative committee, Doctors M. E. Vroman, D. J. McColl and F. V. Varney. Committee to organize a ladies' auxiliary, Mrs. A. J. MacKenzie, Mrs. Theo. Heavenrich and Mrs. D. J. McColl. The society then took action to postpone the arrangement of having Dr. George Waters address the next regular meeting on Tuberculosis and decided to hold an organization meeting of the Ladies' Auxiliary. The meeting to be held at the Saint Clair Inn, with dinner at 7 p. m. Music and dancing to follow the business meeting. Dr. Smith announced the committee in charge of arrangements for this meeting to be the president, secretary and Dr. F. V. Carney of Saint Clair.

The symposium on Eye, Ear, Nose, Throat and Chest conditions in their relation to infants and children was most interesting. Doctors Douglas Treadgold, Sinclair Battley, J. B. Porter, Wadsworth Warren and M. E. Vroman addressed the meeting in the order named. Following the papers, discussion by Doctors Carney, Dick, LaRue, Heavenrich, Bowden and Smith took place, with closing remarks by those who took part in the symposium. Meeting adjourned at 10:30 p. m.

A regular meeting of Saint Clair County Medical Society was held at the Saint Clair Inn, Saint Clair, Michigan, Thursday evening, November 1, 1928.

Dinner was served to the following guests and members: Mrs. Guy L. Kiefer, president of the Ladies' Auxiliary of the Michigan State Medical Society; Dr. and Mrs. Reginald Smith, Dr. and Mrs. Theo. Heavenrich, Dr. and Mrs. A. L. Callery, Dr. and Mrs. W. W. Ryerson, Dr. and Mrs. R. A. Windham, Dr. and Mrs. George Waters, Dr. and Mrs. W. D. Lane, Dr. and Mrs. D. J. McColl, Dr. and Mrs. F. V. Carney, Dr. and Mrs. G. M. Kesl and Dr. A. J. MacKenzie. Dr. and Mrs. E. C. Sites and Dr. Douglas Treadgold were present after dinner.

At the conclusion of dinner the president asked the guest of the evening to address the society. Mrs. Guy L. Kiefer made a short address in which she outlined the scope and purpose of the Ladies' Auxiliary of the State Medical Society. The ladies' organization promotes good feeling and fellowship among the wives of medical men and accomplishes much good for the profession by endorsement of many local activities particularly those of a charitable purpose. "At State and American Medical meetings the Auxiliary entertains and cares for the wives of physicians in attendance and allows them more freedom to attend the various meetings and clinics," said Mrs. Kiefer.

Following Mrs. Kiefer's talk the Society endorsed the formation of a Ladies' Auxiliary for Saint Clair county and appointed the following committee of ladies to act thereupon: Mrs. A. J. MacKenzie, Mrs. Theo. Heavenrich and Mrs. D. J. McColl. The ladies then adjourned to an adjoining room and held an informal meeting.

Dr. George Waters made a short talk upon a series of charts showing interesting data and X-ray pictures of childhood tuberculosis. These charts were sent the society for this use by the

Michigan Tuberculosis Association of Lansing. Unfortunately the data which should have been sent with the charts was not received and rather curtailed the discussion as well as the value of the charts to those in attendance. After Dr. Waters concluded his talk a general discussion of childhood and adult tuberculosis brought the program to a close.

The meeting adjourned at 10:15 p. m.

George M. Kesl, Secretary.

OAKLAND COUNTY

A meeting of the society will be held on Thursday evening, October 25, 1928, at the Board of Commerce, Pontiac. Dinner a la carte will be served at 6:30 p. m.

Doctors S. E. Galbraith and J. E. Church, Pontiac, will address the society on "The Roentgen Ray Findings in Tuberculosis." (Illustrated.)

At the last meeting the following physicians were elected to membership:

Dr. L. Warren Gatley, Pontiac, St. Louis University, 1925. Dr. L. Thomas O'Brien, Pontiac, University of Illinois, 1914. Dr. L. C. Sheffield, Pontiac, University of Chicago (Rush), 1925. Dr. Morrell M. Jones, Pontiac, Detroit College of Medicine and Surgery, 1915 (by transfer from Wayne County Medical Society).

The Oakland County Dental Society entertained the members of our society at golf and dinner at Wise's golf course on Wednesday, September 26. Twenty-four dentists and thirty-five physicians enjoyed the afternoon and evening program. The "dents" produced the best golfer in the person of Dr. Hannan Hubbard, who turned in a score of 80.

In compliance with Chapter 8 governing amendments to the constitution and by-laws of the society, notice was served at the last meeting that at the October meeting there would be presented an amendment to Chapter 6 of the by-laws for the purpose of increasing the annual dues and an amendment to Chapter 1, Section 2, relative to the method of electing members.

The members of the Oakland County Bar Association were our hosts at golf and dinner on Wednesday, October 3, at the Aviation Country Club, Green Lake. Ralph T. Keeling had the low score for the lawyers with a 91, and Dr. L. A.

Farnham carried off the honors among the doctors with a 93. Following dinner and the singing of the ode to the more or less absent bar-risters, "Jimmy" Lynch was pulled out of a golf bag and induced to act as toastmaster. The toasts and roasts were greatly enjoyed by everyone. A feature of the evening was the contest between the vocal quartettes representing the lawyers and the medics, who battled valiantly to a draw.

At the October meeting the president announced the appointment of the following members to serve on the Local Legislative Committee:

Dr. E. V. Howlett, Pontiac; Dr. B. M. Mitchell, Pontiac; Dr. J. S. Morrison, Royal Oak; Dr. N. T. Shaw, Birmingham; Dr. C. J. Sutherland, Clarks-ton; Dr. F. A. Baker, Pontiac, (Ex-Officio).

The Pontiac Exchange Club extends an invitation to the members of the Oakland County Medical Society to be present at their meeting on Friday evening, November 23rd, at 6 p. m. at the Board of Commerce. Dean Hugh Cabot of the University of Michigan Medical School will address the club. Luncheon 85 cents.

The health lecture series which are sponsored by the Joint Committee on Health Education, under the supervision of the University Extension Division were started on November 1st. In the Pontiac district the lecturers and their subjects are as follows:

Dr. L. M. Knox, "The Heart"; Dr. Fred Baker, "The Eyes"; Dr. B. T. Larson, "The Ears"; Dr. P. B. Jones, "Dental Fads and Fancies"; Dr. A. L. Brannack, "Diphtheria" and "Mental Hygiene."

In an attempt to create greater interest in general health the Michigan Committee on Public Health Education, a body representing all the important medical and health organizations in the state, has offered four prizes for the best essays dealing with health subjects and based upon the lectures given at the schools.

The prizes are:—First \$20; second \$15; third \$10 and fourth \$5. Like amounts of money are offered for the best drawings or cartoons on any health subject. These will be made into a book at the end of the year and distributed throughout the state. In addition to the individual prizes two silver cups will be awarded to the two schools enrolling the winners of first places in the essay and cartoon contests.

THE DOCTOR'S LIBRARY

Offering Suggestions and Recommendations

THE SURGICAL PATHOLOGY OF MALFORMATIONS IN THE KIDNEYS AND URETERS—James E. Davis, Detroit. (The Journal of Urology, Vol. 20, Nos. 1, 2, 3, July, Aug., Sept., 1928.)

Davis, having previously shown his particular interest in the pathology of the urinary and genital tracts by admirable contributions, has collected his data relative to malformations in this excellent monograph. Its completeness, penetrat-

NOTE—The monograph referred to in this article is more in the nature of an extensive reprint than the usual type of monograph which is procurable from the publishers. It is to be hoped that sometime Dr. Davis will see fit to make this excellent brochure available to the profession at large. The editor wishes to express his grateful acknowledgements not only to Dr. Davis, but likewise to Dr. Cumming for this excellent review of it.

ing thoroughness and balance between the theoretical and the practical, the latter by details of biological specimens and laboratory material, commend it to both student and practitioner.

Tracing the evolution of excretory function, beginning with the simplest forms of life, the most primitive urinary systems are found well up in the phylogenetic scale; although after the urinary tract is separated from the gastro-intestinal, a fairly regular progression occurs, with finally the provisional kidney replaced by the permanent metanephros in vertebrates. The true kidney when malformed turns back in form and function to some phase of its development, and in that phase corresponds to the normally functioning but prim-

itive kidney of a lower phylum. This basic fact is the foundation for all malformations, explaining satisfactorily, not only the relatively simple deviations in number and position of renal and ureteral structures, but such baffling anomalies as the polycystic kidney. The most valuable of all the author's work is his convincing analogy between the polycystic kidney of the human and the mesonephric and normally functioning kidney of certain lower forms. He has previously elaborated this individual study in other contributions.

Davis points out that in the development of the excretory (urinary) system in the phylum chordata—the highest of the twelve phyla—there is noted the formation of more than one organ to the attainment of possible function, each of the series giving way to the more advanced structure. So we have the pronephros, mesonephros, and finally, the metanephros. The frog, having outgrown its pronephros is satisfactorily served with a mesonephric kidney whereas in higher forms, the mesonephros must be replaced by the metanephros. Coupling these analogies with our common knowledge of the embryology of the human kidney and ureter we have a simple, solid foundation for the understanding of malformations.

In his general discussion of malformations, the author refers to the necessary knowledge of embryology, for a proper comprehension of the problems of congenital and acquired anomalies and for the establishment of a rational basis for the surgical management of the diseases related to the various malformations; the essence of the problem is conservation of the complex and intricate strictures involved.

The following classification is used: 1. Abnormalities of position. 2. Abnormalities of number. 3. Abnormalities of form. This is the usual classification and Davis has chosen to designate the third as "Anomalies of Form," including in this class the horseshoe kidney, the lobulated or fetal kidney, and anomalies of the ureter and renal pelvis. As a separate malformation, he lists the polycystic kidney, discussing it in detail.

The etiologic factors for malpositions involve protoplasmic deficiency, intercurrent infection and extrinsic influences. It is significant that malpositions as well as malformations and the anomalous conditions (especially polycystic disease) predispose to acquired dysfunction, infection and physiological deficiencies. The author's statement concerning the importance of freeing the adrenal gland from a kidney placed abnormally high is probably extreme since the accidental removal of one adrenal is a relative frequent occurrence. Presumably the opposite gland was insufficient to carry on the total function necessary to sustain life in those cases cited. One other valuable point stressed, is the fact that with malpositions and malformations of the kidneys, some such changes may be expected in the pelves of the kidneys and their corresponding ureter, and that especially with malformations, one may expect to find deformities (congenital) in other parts of the body. This latter is of diagnostic value.

These practical surgical problems are discussed: (1) The single kidney, removal of which is quite naturally fatal. (2) The horseshoe kidney, one portion being diseased, especially with stone and infection, and more liable to disease because of its irregular blood supply and abnormal ureteral drainage connections. Resection of the diseased half has been repeatedly successful. (3) The proneness of the fetal kidney to infection. (4) Imperfect drainage due to imperforate urethra, or ureter. The author also recognizes ureteral stric-

ture as a *causa operandi*. (5) The frequency of infection and hemorrhage in polycystic kidneys, especially in the adult, making the institution of corrective measures, imperative.

Polycystic kidney disease is treated as the most important defect of the urinary organs. The several discarded theories of origin are reviewed and the present conception of the cause, namely congenital deformations, is considered rather as a halting in development, at, or near, or including partially, the mesonephric stage. This is quite clearly shown in the study of hundreds of serial sections made in a specimen from a day old child, exemplifying the disease fully developed, but not having the acquired and confusing infection, inflammatory degeneration and hemorrhage of specimens from adults. The occurrence of this disease is not confined to any age as was formerly thought, and both kidneys are universally involved though the cystic degeneration is usually more advanced in one kidney. If one kidney is removed the disease advances rapidly in the other organ, if the patient survives, hence the proper recognition of the disease is of supreme importance.

After outlining the clinical course of polycystic kidney disease, mentioning the three stages, latent or first stage, active second stage giving symptoms characterized by their similarity to chronic interstitial nephritis, and third or terminal uremic stage, the author summarized the important symptoms, and methods of diagnosis, making the subject one of great importance to every clinical observer and especially to the urologist.

Finally the gross appearance and microscopic detail are given, the latter particularly in support of the contention that cysts from throughout the kidney substance, not confined to any one zone, and are the result of a halting in the development of capsular and tubular epithelium. The clinical histories of a series of twenty cases of polycystic disease, are given, together with complete data on the pathological specimens.

The numerous illustrations greatly clarify the entire monograph, adding immeasurably to its value.

—R. E. Cumming, M. D.

THE SCIENCE OF PUBLIC WELFARE—Robert W. Kelso.
Henry Holt & Co., New York. Price \$3.50.

Public welfare is a broad subject but here it is confined to a large extent to that portion of the public who is unfortunate in not being able to provide itself with the necessary food and shelter as well as relief in case of illness. It has been said, "The poor ye have always with you," hence the problem of charity is perennial. Not only have we here discussed the social needs of the honest indigent, but also the subject of the criminal is discussed in its broad outlines, as well as the treatment of the insane and the otherwise mentally subnormal. Often these subjects have been approached in a spirit of prejudice which of course solves nothing. Such subjects may be discussed in a somewhat arid and uninteresting fashion. This is not, however, the case in the present work. Probably the most outstanding feature of the work is its interesting presentation. Open the book almost anywhere and one reads on absorbed in the contents hardly knowing when to put the book down. While this work is intelligible to the broad general class of reader it will be of particular interest to the medical profession who are often brought face to face with the problems dealt with in the book.

A TEXT-BOOK OF PHARMACOLOGY AND THERAPEUTICS—Hugh A. McGuigan, M. D., Professor of Pharmacology and Therapeutics, University of Illinois, School of Medicine, Chicago. Octavo volume of 660 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1928. Cloth, \$6.00 net.

This is an entirely new work on the subject. It presents the important facts of pharmacology. The author has attempted to connect up physiology, biochemistry and pharmacology with clinical application. All the important drugs used in actual practice are dealt with in a very thorough way. Fifty pages are devoted to the subject of germicides and antiseptics. The book is well indexed and will serve as a very convenient book of reference for the therapist in whatever field.

CRITERIA FOR THE CLASSIFICATION AND DIAGNOSIS OF HEART DISEASE—By a committee, Joseph H. Bainton, M. D., Robert L. Levy, M. D., William C. Munly, M. D., Harold E. B. Pardee, Chairman, appointed by the Heart Committee of the New York Tuberculosis and Health Association, Inc. Paul B. Hoeber, New York. Price \$1.50.

The importance of heart disease as a cause of morbidity and mortality among the population, in which it ranks as a leading factor, is gradually attaining the prominence which it deserves. The prevention of heart disease, attacking as it does all types of people and among them the more intellectual and more useful members of the community, is a pressing problem. Its solution has been retarded by the fact that there has been no definite classification of the various disease entities which make it up.

A committee of the New York Tuberculosis and Heart Association has recently compiled a book of ninety-two pages, which gives in short form, the nomenclature, the aetiology, the anatomical basis and the pathological physiology in a very clear way. The general adoption of the terminology used will result in a more useful statistical study of this condition. As it is very briefly put and follows very closely the lines laid down in our regular text-books, it is not necessary to quote very much in detail.

It is interesting to note, however, that myocarditis of both the acute and the chronic form is recognized, the existence of which is a question which has aroused considerable controversy. That the committee is right in this contention, it seems unnecessary to attempt to prove. Anyone with any experience with heart diseases, knows that the chief symptoms with which we have to deal in the treatment are those of congestive heart failure and that these are provoked by disturbance in the myocardium. Those who are treating the chronic forms of heart disease have, as one of their chief problems, the handling of arrhythmias, these being due in the great majority of cases, to changes in the physiology of, or anatomical change in the myocardium. The Aschoff bodies present in rheumatic heart disease and the spirochetes which are now fairly often discovered in the myocardium, since Warthin made his original investigation, are all conclusive evidence that there is such a condition.

PROBLEMS IN SURGERY; UNIVERSITY OF WASHINGTON GRADUATE MEDICAL LECTURES FOR 1927—George W. Crile, M. D., edited by Amy F. Rowland. Octavo volume of 171 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1928. Cloth, \$4.00 net.

This work consists of a series of lectures under the general heading of "Course of Graduate Medical Lectures" of the University of Washington. They were given during the summer of 1927. The writer describes the series in an unpretentious way as a record of an informal discussion of the subjects treated which are of the first importance

in present day surgery. The titles of the lectures are as follows: (1) The Management of the Acute Infections; (2) A General Consideration of the Treatment of Premalignant and Malignant Conditions; (3) Operations on the Bad-Risk Patient; (4) The Mechanism of Hyperthyroidism; (5) Diagnostic and Operative Clinic; (6) A Bipolar Interpretation of Certain Normal and Pathological Conditions. The list of illustrations numbers forty-nine. Dr. Crile is known almost as well in the state of Michigan as in his own state, both as an author, as a surgeon, and as a lecturer on surgical subjects. The present volume is on par with Dr. Crile's well known volumes on other subjects.

MODERN X-RAY TECHNIQUE—Ed. C. Jerman; Bruce Publishing Company, St. Paul, Minnesota.

The scope of this work is indicated in the title. It is probably the most exhaustive and clearly written work on the subject of radiographic technique in existence at the present time. All phases of the subject are presented by the writer who is himself the doyen of X-ray technicians. The writer has been acquainted with Mr. Jerman's work for a number of years. As a teacher he has few equals and no superior. Roentgenologists will welcome this volume since it relieves them of a lot of detail in the matter of instructing operative assistants. Mr. Jerman's experience with X-ray machines and technique has been coincident with radiography from its discovery in 1895. The first chapter discusses the personality of the X-ray technician. This is a timely discussion in as much as the position is one requiring a high degree of intelligence as well as caution and tact. The text of the various chapters is not only clearly written but each chapter is supplemented by a series of questions and answers. There is room for doubt as to whether this is good pedagogics. It must be admitted, however, that it is certainly a matter of convenience and is undoubtedly excusable for the instruction of persons who may not have had the advantage of high school or college physics. A commendable feature also is the emphasis placed on protection as it pertains to both operator and patient. Every technician should almost memorize this chapter. The final chapters of the book describe in detail the positions and proper orientation of the patient to produce the maximum results. The format of the book is such as to make it altogether a pleasing and attractive volume.

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In many cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

SYNTHETIC EPHREDINE COMPARED TO NATURAL

Synthetic ephedrine has little difference in action from the natural product made from the Chinese herb, Ma Huang, announced Dr. K. K. Chen of the Johns Hopkins University, at the meeting of the American Pharmaceutical Association her recently. Dr. Chen reported the results of investigations on this drug, which is used extensively to relieve hay fever and asthma, to dilate the pupils of the eyes before examination, and to contract congested membranes of the nose. Qualitative and quantitative tests indicate that the two drugs have almost the same properties. In the treatment of asthma, the synthetic drug appears to have a weaker action than the natural. In the effect on the membranes of the nose the two products are similar.—Science Service.

PHYSIOLOGICAL AND AUTO EXPERIMENTS MAKE VEHICLE TUNNELS POSSIBLE

How modern tunnels for vehicles under rivers, such as the Holland Tunnel under the Hudson river, have been made possible by means of experiments on animals and experiments in which full-sized autos were driven through a small experimental tunnel, is revealed in a report to the Engineering Foundation here by A. C. Fieldner, chief engineer of the experiment station division of the U. S. Bureau of Mines. When the Holland Tunnel was first proposed, says Mr. Fieldner, many engineers thought that it would be impossible to ventilate. The amount of poisonous carbon monoxide given off in the exhaust was thought to be so great that it could not be carried away. Experiments made by Prof. Yandell Henderson at Yale University showed that as much carbon monoxide in the air as 4 parts in 10,000 would not be harmful if the exposure did not exceed an hour. The first experiments were made on animals, then Prof. Henderson and his students tried it on themselves.

Then an experimental tunnel was built at the experimental mine of the Bureau of Mines near Pittsburgh. This was 9 feet wide, 8 feet high and 400 feet long. Above the ceiling was an air duct 3 feet high, and below the floor was one 2½ feet high. Either could be used for introducing fresh air or for exhausting contaminated air.

Small automobiles were driven back and forth through the tunnel at a speed of 10 miles an hour, and at 40 foot intervals. Tests were made with various methods of removing and admitting air, and examinations of the drivers by blood tests were made before and after. It was found that the most efficient method of ventilating was to admit the fresh air at the bottom and to remove it at the top.

Another safety device developed by the Bureau of Mines in use in the Holland Tunnel is an automatic carbon monoxide recording machine, which rings a bell and flashes a danger light when the gas becomes more concentrated than 4 parts in 10,000. Then immediate steps can be taken to increase the circulation of air.—Science Service.

"POKER SPINE" FOUND ON ESKIMO SKELETON

"Stiff backbone" is said to be a good thing, morally, since it indicates strength of character, but the backbone indicated by medical men as a "poker spine" must be considerable of a nuisance. Bands of new bone run up and down the vertebral column forming sometimes a rod of unbendable bone where a flexible structure should exist. Such "poker spines" are found among some of the ancient dinosaurs, usually in the tail, where the backbone for ten feet or more may be rendered solid by the ossification of the vertebral ligaments. It is further known in many fossil mammals, in fossil crocodiles, and is very common in ancient man, especially among the ancient Egyptians whose bodies were buried in the hot, dry sands of the desert. Everything under the sun has been stated as the cause of this affliction which renders the patient so helpless. The weather is said to cause it. Alcoholic liquors, tobacco, cave dwelling, the nature of the food, the clothing, the condition of the teeth and other conditions are said to be responsible. At the city museum in Cairo are preserved "poker spines" from the ancient Nubians who dwelt in the hottest, driest place on earth and, by contrast, the San Diego Museum possesses a "poker spine" of an Eskimo,

from St. Lawrence Island in Bering Sea, surely one of the coldest, wettest places under the heavens. It is thus possible to rule out the weather as a cause of the stiff backbones. The Eskimo not only had his backbone stiffened but it was also fused to his pelvis, rendering him totally helpless.—Science Service.

STOUT SISTERS SPEND THOUSANDS IN EFFORTS TO REDUCE WITHOUT DIETING

Patent medicine sharks are reaping profits aggregating millions as a result of the modern craze for sylph-like figures, according to Dr. Frederic Lyman Kebler, chief of the Division of Drugs, U. S. Department of Agriculture. Co-operating with the Federal Postoffice in its efforts to prevent use of the mails to defraud, Dr. Kebler has directed the investigation and analysis of more than forty so-called obesity cures, not one of which, he states, could be recommended as being both effective and non-injurious. The remedies tested range from bath salts, chewing gum, pills and patent teas, to reducing creams and soaps. All of those examined, in the class involving internal use, have been found to contain a few cents worth of cheap laxatives and simple household products, which could not conceivably aid a person intent upon losing weight. Many of the pills contain thyroid extract, which should never be administered except by a physician. One sample of bath salts turned out to be common photographic "hypo". The creams usually have been found to be soap. Heavy fines are levied against manufacturers, convicted of fraud, and dozens of the remedies have been put off the market, but new ones keep cropping up to take their places. Dr. Kebler says profits on such products range from one to four hundred per cent, and it is not unusual for the annual net income of the promoter to reach six figures, sometimes hitting the half million mark.—Science Service.

LIVING BACTERIA FOUND IN 250,000,000 YEAR OLD ROCKS

Living bacteria have been found in rocks of Algonkian age, estimated to be at least a quarter of a billion years old, by Prof. Chas. B. Lipman of the University of California. If they prove to have been sealed in there from the beginning they will be incomparably the oldest living things on earth; by comparison with them the Big Trees of California, the giant cypress of Tule, Mexico, and all other noted ancient trees will be mere incidents of a moment ago. Prof. Lipman is giving a preliminary report of his researches in the forthcoming issue of Science. He states that the outsides of the rocks were subjected to drastic sterilization processes before they were opened, and that all possible precautions were taken against contamination of his cultures from other sources. The bacteria obtained from the broken rocks are quite different from forms now known to Prof. Lipman, though they have a strong family resemblance to certain thread-like colonial bacteria found in water and soil. He states that he has become convinced that these microscopic living beings are indigenous to the rocks in the spore or resting condition.

If they are as ancient as the rocks themselves, their claim to the title of oldest living things is easily established. Bacteria reproduce simply by dividing into two parts, each of which then grows up to the same size as the original cell. Either or both of the so-called "daughter" cells is thus

really identical with its "parent", a paradox long known to bacteriologists. Bacteria never die unless they are killed. Thus these quarter-billion-year-old rocks may contain quarter-billion-year-old bacteria. There is one possible catch. Prof. Lipman takes into account the possibility that these bacteria may have got into the rocks at a date much later than their own formation. They were specimens found at the surface. However, other bacteria were similarly found in rocks of Pliocene date, a much more recent geological period; and these rocks had been newly brought from a depth of several hundred feet.—Science Service.

SWISS ARMY AIDS IN GOITER STUDIES

The Swiss army is doing its bit in defense of the country's health. Efforts to eradicate goiter are being made by means of a very thorough investigation of the conditions that may possibly cause this disease, and the arm recruits are being examined particularly to this end.

The examinations have brought forth the surprising fact that goiter is most prevalent in that part of the country in which German is spoken, in contrast to the French, Italian and Spanish sections of Switzerland. Dr. Stiner of this city who has conducted the statistical survey says that of course the presence of goiter does not depend on the language itself, but that the customs and habits of the German-speaking Swiss probably have some bearing on the subject.

For instance, the German methods of cooking are quite different from the French and Italian. This is particularly true of the preparation of vegetables and foods rich in vitamins and iodine. The non-Germanic people customarily eat more raw foods than the German speaking people.

The number of cases of goiter in the entire country has very much increased in the last decades but there are far fewer serious cases now than ten or twenty years ago.—Science Service.

LOOKS TO MEDICAL COLLEGES TO REDUCE MATERNAL DEATHS

Reduction in our present high maternal death rate must be based on adequate obstetrical training in the medical schools, members of the American Public Health association were told at a recent meeting in Chicago by Dr. Carl H. Davis, chairman of the section on obstetrics, gynecology and abdominal surgery of the American Medical association.

In spite of the fact that we have relatively few midwives, our maternal mortality is rather high, compared with that of other countries. Obstetrics is the specialty of the general practitioner, the nucleus around which he builds his practice. This subject should be given more attention in the medical school, Dr. Davis advised, in order to reduce this high death rate.

At the same session Dr. Blanche M. Haines of the U. S. Children's bureau, announced that maternal mortality rates for the entire registration area have shown practically no change in the period from 1917 to 1926. In the cities, the rate increased by 3.9 for every 10,000 births during this period. In rural districts a slight decline occurred. The rate for the whole area in 1917 was 66.2 deaths in every 10,000 live births. In 1926 it was 65.6 per 10,000.

Factors credited with the decline in the maternal death rate in rural districts are educational work, improvement in obstetrical training of

physicians, instruction and supervision of midwives, assistance of lay organizations of women in the educational program and extension of improved highways.

Twelve states are now studying the subject with the assistance of the Children's bureau. Results are not yet reported from all states and no conclusions can be drawn from the studies at this stage.—Science Service.

SCIENTIFIC FOOD ADVERTISERS MUST FOLLOW RULES OF SCIENCE

If advertising would invoke the aid of science it must follow the rules that govern research in science, said Dr. E. V. McCollum of the Johns Hopkins University at a meeting of the American Public Health Association. Particularly in food advertising, the public is being misled by a wrong use of science. Dr. McCollum presented a plan for an advisory board to consider food advertising.

The board would be composed of eminent scientific men and would only act to advise publishers on strictly scientific matters. This board would decide on questions of accuracy, authenticity, propriety and applicability of scientific statements in food advertisements.

Advertisers themselves are feeling the need of such a board, for the idea was first suggested by John Benson, president of the American Association of Advertising Agencies. Dr. McCollum believes that publishers are also feeling perplexed over the developments in advertising of food products, which have become so extravagant in their claims.

The reason for the fierce competition prompting this wave of so-called scientific advertisements of food is that we are at present eating all we possibly can without harm, says Dr. McCollum. Advertisers, in order to sell more of any kind of food, must take advantage of present scientific knowledge of our nutritional needs. However, too many of them are being led to give the public half-truths in place of scientific facts.—Scientific Service.

CHRONIC PEPTIC ULCER

In 375 gastro-enterostomies performed by Robert C. Coffey, Portland, Ore., in a 24-year period the mortality was 2.4 per cent, while there were 96 cases in which operation other than gastro-enterostomy was performed, with 11 deaths, 11.4 per cent. This discrepancy is more apparent than real because, first, the gastro-enterostomy operations were performed largely for duodenal ulcer, which is not such a serious condition as gastric ulcer, and, secondly, the 96 radical operations include most of the gastric ulcers and the bleeding ulcers, some of which were duodenal. During the eleven years from 1917 to 1927, inclusive, there were 324 patients operated on with eight deaths, a mortality rate of 2.46 per cent, against the total mortality for twenty-four years in 471 cases of 4.2 per cent. During the last period of eleven years there were 294 gastro-enterostomies with five deaths, a mortality of 1.7 per cent, as against 2.4 per cent of the gastro-enterostomies for the entire series. During this 11-year period there were 30 operations other than gastro-enterostomy with three deaths, a mortality of 10 per cent, but these three deaths were in the patients described as handicapped in whom a gastro-enterostomy was not practical. Coffey describes his methods of procedure in these cases.

—Journal A. M. A.

SUPPLEMENT TO
THE JOURNAL
OF THE
Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

FINAL REPORT
of the
COMMITTEE

TO SURVEY AND STUDY THE PROBLEM
OF
HOSPITAL CHARITY
IN
MICHIGAN HOSPITALS

Appointed by the Michigan State Medical Society

* * *

THE COMMITTEE:

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Detroit.

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REPORT OF THE COMMITTEE
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PART 1. COMMUNITY HOSPITALS

PART II. The UNIVERSITY HOSPITAL

INTRODUCTION

At the one hundred and seventh annual meeting of the Michigan State Medical Society, held on Mackinac Island in June, 1927, your Committee submitted a preliminary report dealing with the problem of hospital charities in Michigan hospitals. That report was published in a supplement to *The Journal of the Michigan State Medical Society* in July, 1927, and may well be referred to in connection with the present one. It was divided into two parts, the first dealing with community hospitals, the second with the University Hospital. In the first part, the Committee made certain general recommendations. In the second, the Committee presented the results of its study up to that time, but purposely refrained from making any recommendations whatsoever. The object of the present report is to complete the recommendations made in the first part and to give the results of further study and to make certain definite recommendations in the latter.

PART I

COMMUNITY HOSPITALS

In its report last year, your Committee gave a considerable amount of data dealing with the community hospitals of the state, and enunciated certain principles which seemed to it to be sound, looking to the protection of the pocketbook of all hospitalized patients and such as involved the admission of those receiving charity. This necessarily involved, to some extent, the

whole question of hospital financing. We have devoted some little time this year to the same questions. We have been impressed with the tremendous amount of time and effort which is being given to these medical-social-economic subjects by large hospitals, and the space in popular and special literature which is being allotted to them. They are problems to which there are at present but few definite answers. We are apparently in a period of intense experimentation, of exchanging views and of expressing opinions, and yet they press for solution. Progress, however, has been great and gratifying. We mention all this for fear that too much may be expected of your Committee, that after all are obliged to rely upon their personal experience in hospitals and their knowledge of the financial difficulties of their patients that have received institutional care.

We may be sure of one thing—namely, that our hospitals are making a righteous endeavor to solve the problems in a way fair to all concerned, including the doctor. We have learned to have greater sympathy for the social worker connected with such organizations. She is not the person of infinite sympathy for the indigent patient and one who is always striving to obtain our services without cost for those who might pay, as she is sometimes pictured. She makes mistakes, yes, but who of us has not done the same in his private work? Their methods of investigation are far more painstaking and exact, and lead,

we believe, in the main, to more just decisions than ours as to the ability of a patient to pay. We would bespeak a greater confidence in her and a greater co-operation between her and the doctor than are now in vogue.

Our last year's report contained much that, for the sake of brevity, we shall not repeat here. Some reiteration, however, is necessary.

HOSPITAL FINANCING

1. The original cost of buildings and of additions and other capital expenditures should be provided for from outside sources.

2. The articles of incorporation should be such as to free the institution from all taxes. This is the contribution of the tax paying public and stamps it as a purely philanthropic enterprise, devoted primarily to the care of the sick and disabled that come to its doors. This purpose should be kept ever in the foreground.

3. Governing bodies should endeavor to see that the business affairs of the hospital are conducted in an expert manner, looking always to the present needs and future development. In our Michigan hospitals and under ordinary circumstances, the "bad debts" item should be kept within five per cent. We believe this can be done without harshness to patients.

4. All unnecessary financial burden should be removed from the patient's shoulders. He may justly bear the cost of materials, such as food, linen, drugs, surgical supplies, etc., administration, house-keeping, laundry, common labor, heat, power and light, social service, laboratories, operating rooms, building maintenance, and other items from which he receives direct benefit.

5. The cost of a training school for nurses is a heavy one and the special nurse one of the major expenses of hospital illness. Patients now bear practically all of the costs of the training school. A part of this burden, at least, should fall upon other shoulders. The school should seek to furnish adequate nursing and to relieve patients as far as possible from the burden of the "special". A charge which represents the value of the nursing which he receives should be included in the expenses to be met by the patient.

6. The cost of internes' maintenance seems a proper one for the patient to bear, but any extraordinary educational expense may well be placed elsewhere.

7. The cost of research and educational advantages for the staff should, if possible,

be met from other sources than that of the patient.

8. Minor new equipment, replacements, repairs, obsolescence would all seem to be properly borne by the patient.

9. Although the habit is less glaring than formerly, many miscellaneous expense items are now improperly allocated. Sensitiveness to the patient's pocketbook might well be even keener than at present.

10. Out-patient department costs, if carried at less than maintenance, should not be a general hospital burden to be borne by patients occupying the hospital.

We believe it a sound principle in hospital economics that the patient pay the cost of the particular accommodations that he occupies (as near as can be calculated) and his extras, and that those in better accommodations should not pay any part of the way of those in simpler ones. Those now carried at a less than cost figure should be provided for from outside sources, and that in case of corporations and other employers of labor under the compensation law, organized charity, social bodies doing welfare work, and city and county charges, the cost price should be charged, and not present ward rates, which are less than cost.

CHARITY WORK

The charity work of a community hospital is one of the most knotty questions connected with such institutions. We have already called attention to the vast amount of work which is being done to put it upon a more rational and discriminating basis. Accustomed as we are to working out our own problems in medicine and surgery on the basis of knowledge obtained by investigation, the method must appeal to us as being eminently sound. If we appreciate the difficulties with which hospitals have to contend, we will not be unappreciative of the tremendous efforts that are being made in this direction. At the same time, we must recognize that the matter has not been taken up with equal seriousness in all of our community hospitals; that the methods now in vogue are in process of development and contain imperfections, and that there is even a human element in carrying out the program. At the present time, we must emphasize again what we said last year—namely, that in the last analysis the judgment of the doctor as to whether the patient is entitled to charity or part charity which is contemplated should be paramount in the decision, and that both hospital and profession should recognize his right to make an adverse de-

cision. Again we call attention to the fact that his own judgment may be quite as erring as that of the social worker—sometimes more so, and that it is his duty to go over all the data pertaining to the patient's finances before passing hasty judgment.

In social investigations of this kind we believe it is a sound principle that the family unit should be taken as a basis for estimating the finances of the patient, and that a minimum family budget of expenses should be computed for the particular community or communities from which the hospital draws its material.

In the computation will enter the total earnings of the family, the number of children who are dependent, the state of employment or unemployment, the indebtedness of the family as a whole, previous illness and expense, the effect that the particular illness may have upon the family income, the nature of the disease, and the amount of money that it would require both to meet the medical expense and a possibly increased family expense. The character of the patient is no small item. His responsibility and the ability to manage his expenditures is one of the variables which must be reckoned with. The personal judgment of the social worker must frequently be called upon in making her final decision.

The larger the hospital, the more elaborate must necessarily be the organization devoted to social investigation, and the less will personal knowledge of patients be possible. We believe that every community hospital should have some methodical way of making such investigations. For the largest hospitals and those who can adopt it without unreasonable burden, we suggest the plan that we gave in detail in last year's report, in connection with Harper Hospital. In the medium sized hospitals—say of approximately 50 to 75 beds, the employment of a smaller number of workers, and perhaps a less elaborate system, would be merely common sense. For the medium sized hospital we suggest the following plan:

Requirements—A social worker on full or part time. Often a volunteer from one of the guilds or local charitable societies may well do. Record blanks; a place for making investigations, and for filing records.

Data to be Obtained—Name; address; record number; date; members in family; their sex, date and place of birth; time in the United States; time in city; occupation, school grade; weekly wages of family

members and their health; others in household to be cared for; doctor referring case; chief complaint; medical diagnosis and prognosis; social diagnosis; employers; family physician; possible sources of pay outside family, i. e., relatives, friends, churches, lodges, etc., their relationship to patients and their addresses; debts of family, for what, original amount, amount paid and balance due; income per month—from wages, from lodges, from benefits and compensations, from property rentals and from other sources; expenditures per month—rent or house contract, food, clothing, heat and light, other needs; equity in real property, value of the same; value of property owned outright.

For the smallest hospitals (say of 25 beds), a personal knowledge of the patient obtained from the hospital or doctor will usually be paramount in the investigation. We believe, however, that all of the main data should be reduced to writing. The value of such records is very great from many standpoints.

Requirements—A superintendent who may devote the required time to the investigation. Record blanks (cards) and a simple filing system.

Upon such blanks or cards may be recorded the following data:

Name; address; date; occupation and that of supporting members of the family; number of dependents; state of employment or unemployment; debts or other obligations; previous illness; medical diagnosis and prognosis; name of family or referring physician; available income per month; expenditures per month, including rent, food, clothing, heat and light, etc., value of real estate; remarks.

PART II

THE UNIVERSITY HOSPITAL

In its report to you last year, your Committee gave you data bearing directly or indirectly upon the charity work of that institution. The statistics given were largely those of a period from May 1, 1926, to February 1, 1927—nine months in all, and were furnished us by Dr. Harley A. Haynes, Director of the University Hospital. We have recently received from him a statistical report based upon the experience of twenty-six months, from May 1, 1926, to July 1, 1928, and covering what are to us the more important items given in last year's report. The general averages are about the same, the distribution ratio of patients over the various groups being within a fraction of one per cent. There

has been a very slight decrease of the relative proportion of "pay patients" (i. e. —those who pay their hospital expenses), particularly those entering without the direction of outside physicians. The only class showing any increase at all is the emergency group (VIII), which increased approximately one per cent of the total admissions from January, 1927, to June, 1928. The geographical distribution remains practically the same. To refresh your memory and bring a few important statistics up to date, the following tables are presented. They deal with the number of patients admitted to the hospital in the eight different groups.

*Total hospital registrations, 26 months.....	60,803
Average per year.....	28,063
Total admissions to hospital in 26 months.....	38,582
Average admissions per year.....	17,807

* Patients applying to the hospital are first "registered", if found eligible. Only a part of these are actually admitted and assigned beds.

GROUP I.

"State Patients: Those patients hospitalized by the Probate Court under Public Acts 267 of 1915, or 274 of 1913." (see last year's report).

Total 26 months.....	20,645
Average per year.....	9,533

GROUP II.

"County Patients: Those patients who are sent by the Superintendent of the Poor and whose hospital expenses are guaranteed by the County in which the patient resides."

Total 26 months.....	898
Average per year.....	414

GROUP III.

"Students in attendance at the University of Michigan or the Michigan State Normal College at Ypsilanti."

Total 26 months.....	534
Average per year.....	246

GROUP IV.

"Persons bringing letters from their regular Medical Attendants, recommending their admission." (Patients in Group 6 not included).

Total 26 months.....	4,218
Average per year.....	1,947

GROUP V.

"Persons who can truthfully sign an affidavit that they are unable to pay the usual minimum fee charged by the Medical Profession outside the hospital."

Total 26 months.....	7,325
Average per year.....	3,381

GROUP VI.

"Patients who are able to pay, in addition to their hospital charges, fees for

Professional services, and are admitted to the services of Medicine, Surgery or X-ray."

Total 26 months.....	1,488
Average per year.....	684

GROUP VII.

"Doctors and the families of doctors, nurses, hospital staff and employes."

Total 26 months.....	1,506
Average per year.....	695

GROUP VIII.

"Emergency Patients: Patients entering the hospital voluntarily without medical refer or public guarantee. This includes emergencies and 'guests' indicating relatives admitted with patient, and charged according to service rendered—i. e., room and meals, etc."

Emergencies, 26 months.....	1,901
Guests, 26 months.....	58

	1,959
Average, per year, emergencies	877
Average per year, guests	27

904

Your Committee has added considerably to its funds of information this year, and has had several important conferences, including one with Dr. Clarence C. Little, President of the University, and Dr. Hugh Cabot, Dean of the Medical School. It acknowledges with gratitude its debt to Dr. Harley A. Haynes, Director of the Hospital, who has been ever ready to give information and has devoted much time and interest to our purpose.

Before giving you the final results of its study during the past two years, and making the recommendations which are suggested by it, your Committee thinks it well to define, as it sees it, the position of the medical profession of the state in the matter before us, and thus perhaps make clearer the reasons for making this investigation.

STATE MEDICINE*

The practice of medicine may be properly defined as the application of scientific

* The American Medical Association has declared its opposition to State Medicine in the adoption of the supplementary report of the Reference Committee on Legislation and Public Relations, St. Louis session of the House of Delegates, 1922. Journal of the A. M. A., Vol. 78, p. 1715.

"The American Medical Association hereby declares its opposition to all forms of 'state medicine' because of the ultimate harm that would come thereby to the public weal through such form of medical practice. 'State medicine' is hereby defined for the purpose of this resolution to be any form of medical treatment provided, conducted, controlled or subsidized by the Federal or any state government or municipality, excepting such service as is provided by the Army, Navy or Public Health Service, and that which is necessary for the control of communicable diseases, the treatment of the indigent sick, and such other services as may be approved by and administered are not disapproved by the state medical society of which it is a component part."

facts to the prevention, the cure or the alleviation of disease. When the commonwealth, through its appointed agents, undertakes this duty, we have "state medicine" in its broadest sense. Physicians, however, as a rule, use the term with a more restricted meaning, and speak of such practice as that in which the commonwealth undertakes those duties that have been performed by a group of private individuals who have been educated in our universities and colleges and duly qualified and registered as physicians. The profession of Michigan recognizes that it is purely within the province of the state to do the work now being done by our Public Health Department in the way of disease prevention and public education. Such is not only necessary for the public weal, but an inestimable aid to physicians in their daily work. It recognizes too that the wards of the state that are in public institutions, such as asylums and prisons, must be under state control and cared for by physicians employed by the state. Again it recognizes the employment of city and county physicians and the care of the poor as a necessary and legitimate function of the community. It heartily approves of the idea that the state and its various counties, from purely humanitarian motives and for economy, should undertake the care of its indigent sick and disabled, in order that suffering may be relieved and that they may be restored to a state of social independence. The items of practice enumerated above are purely of public concern and should be sharply distinguished from the personal medical care accorded to the self respecting, economically independent citizen.

We are in the midst of profound social changes and we are wondering what place the physician of the future will hold in the scheme which is now unfolding. We are looking with a concern, perhaps not fully unjustified, to the many encroachments which are being made upon private practice. Among other things, the uncertainty as to what part the commonwealth is to play in medicine is causing us some apprehension. Here in Michigan, at the present moment and in this inquiry, we are particularly concerned in regard to practice at the University Hospital.

Is the socialization of medicine to develop here as it has in some European countries? Is the practice of medicine to be brought gradually under direct state administration? To be sure, there is much to hinder progress in this direction. We are in an era of great prosperity in which

our people are not only able to pay for the necessities of life, including medical service, but for many luxuries as well. The average American desires to be independent and to pay his way. Undoubtedly there will always be a demand for the personal services of the private physician because of the obvious personal interest and attention which he is able to devote to his patients, but we fear and we believe with some justification that conditions of practice may be made so difficult that the private physician, and consequently the community that he now serves, may suffer severely.

President Coolidge has recently sounded a vigorous warning against paternalism. When a man has devoted his life to the problems of government, and knows its strength and weakness, we can well afford to respect his opinion. He is seeing the necessity of stressing the dangers of such interferences and of substituting governmental for private enterprise. America has attained its industrial leadership because private initiative has been untrammelled. Europe, under paternalistic principles, has been slipping backward. Medicine in Europe, once individualistic, but today confronted by the inroads of state control, is rapidly losing its leadership to young America. We believe that the personal practice of medicine is safer in the hands of the private physician than in those of the state. Under private management we have seen a slow, steady improvement in the standards of practice and the medical care that has been extended to the people of America. Perfection will never be attained, but we believe that, in the main, progress is satisfactory. America is pre-eminently a land of opportunity and with this idea prevailing, every man is stimulated to give the best of himself, and this applies to the physician as well as to others, for he naturally is only human. The problems of private practice are very often extremely difficult, requiring devotion to the patient's interests, concentration, most careful discriminations, and often much time and patience for their solution. They require frequently a knowledge of the private affairs of the patient and his most intimate confidences, that only a physician, who is at the same time a friend, can have. It requires often too great sacrifices of personal convenience on the part of the physician. We believe that only under private control can these things be adequately met, and that otherwise society would suffer.

The physician is interested in his means

of livelihood. He would scarcely be a good citizen or a good physician if it were otherwise. The advance of medical science has called for an ever increasing expenditure for labor, equipment, transportation, medical literature, attendance on medical meetings and a thousand and one incidentals. These things take a substantial portion of his gross income. The cost of living has increased. The hours are long and the labor strenuous, and must be compensated for by more recreation and vacations if he is to maintain his health. And lastly, insurance against misfortune and old age must be provided for. Competition is keen, the income is irregular and usually ceases when, for any reason, the doctor is not at work. His financial responsibilities are probably no greater than those of many a business man, but nevertheless they call for a great deal of consideration and a protection of his pocket-book, and this constitutes one reason why he is opposed to "state medicine". It is an axiom that no business or profession can succeed in giving satisfactory service unless the financial returns are in keeping with that service. We believe we have a right to ask that the commonwealth which has educated us and has charged us with the responsibility of caring for the sick throughout the state should hesitate to make our burdens heavier.

THE UNIVERSITY AND ITS MEDICAL SCHOOL

The State Medical Society and its individual members take pride in the University and the position which it occupies among the great institutions of learning. It is *our* University and we owe to it our allegiance. We, of course, thoroughly approve of its objects, for education is one of the great fundamentals upon which the life of the nation and the welfare of its people depend. We are particularly interested in the Medical School and the Hospital, not only because they are integral parts of the University, but because they represent to us that branch of science to which we have devoted our lives.

Both the Medical School and the Hospital are under the President and the Board of Regents of the University. They are closely allied in their activities and separated only for purposes of administration. The Board of Regents is a constitutional elective body and has full power and authority in directing the policies of the University. It is necessary to have this background in discussing the matter at hand.

Your Committee believes that the med-

ical profession of the state fully realizes the importance of the work which the Medical School is doing in preparing students for practice and what it means to the people of our state. The better the preparation of those students, the better will be the service which they afterwards render. We realize that an ample and varied clinical material is necessary in the teaching of undergraduates.

TEACHING MATERIAL

The Hospital is now receiving patients at the rate of 28,063 a year, of whom 17,807 are admitted and assigned beds and 10,254 remain as out-patients. There are approximately 190 students in the junior class and 150 in the senior; a total of 340, for whom provision for teaching material must be made. Members of the clinical staffs use this same material and no further consideration of their needs in this respect, we are told, is necessary. The teaching requirements center in the student. All of the 28,063 are available for study and instruction—at least there is no rule which forbids it. The distribution of material is naturally uneven for the various departments — for example, oto-laryngology would seem to have an over abundance and obstetrics too little, though special effort is made to obtain such patients. The variety necessary to illustrate pathological conditions which the students should be shown seems very satisfactory.

Your Committee has been able to obtain no very satisfactory answers to the question as to whether the amount of clinical material was satisfactory or not—it might well be so because of its necessarily unequal distribution and the different opinions of the heads of departments as to what constitutes such. We have been impressed with the fact that, in some departments at least, the care of such a great volume of patients is a decided tax upon the time and energies of the teaching staff. The administration itself of a department in which there are a large number of patients must be a burden of no little moment. We have a feeling, though it is not a conviction, that fewer patients in some of the departments would serve the purposes of the medical school rather better. Considering the total number registered, it is apparent that the material is not altogether economically used. Patients in Groups III, VI, and VII, (total 1625 a year), are used but little, and the 10,254 a year registered, but not admitted, are also in considerable part unused. Were the demand for a larger amount of material a

pressing one, a more deliberate effort to utilize these patients for teaching would, it seems to us, have been in evidence.

ADMISSIONS

Bearing in mind the attitude of the medical profession toward "State Medicine", its real interest in our University and its Medical School and Hospital, and with great appreciation of their needs and the difficulties with which they have to contend, we approach the matter of admissions which is the main issue in our inquiry.

It is, it seems to us, essential that the whole procedure of admissions be reviewed and that then the patients be considered in groups and analyzed as such, for they vary greatly in kind and the problems presented are widely different.

All patients applying at the hospital are first registered, if considered eligible. An attendant at the desk obtains the usual data of name, age, social status, etc. Inquiry is made as to income, number of dependents, and in a general way an attempt is made to classify them as to their ability to pay. Only such as are considered to be in the "A" class (see below) are accepted, duly registered and admitted as out-patients, except that patients for the medical, surgical and X-ray departments are received, whatever their circumstances. Also, no inquiry as to ability to pay is made in the case of those provided for by the state and counties—such inquiry is made by the Probate Court which issues the order. Patients in Group VII would also be an obvious exception and patients in Group VIII are accepted without formality and investigation as to finances made afterwards. Patients in Group III are paid for out of funds provided by the University Health service and are admitted without reference to circumstances.

The desk attendant is, and must be, a person especially fitted for the work and who has some training in social investigations of this kind. If hospitalization is recommended, the patient is referred to the credit department, where a detailed financial inquiry is made to check the information previously given and to obtain information as to their financial responsibility. "Pay patients" make a deposit to cover probable hospital expenses.

Patients of the "A" class, admitted to the departments of surgery, medicine or X-ray, are again questioned when in the course of the examination it is thought they might well pay small fees for professional service.

There is, as pointed out last year, a social service department at the hospital. Contrary to our impression at that time, this department is used almost solely to inquire into the family and social status of those to whom it is thought such service and advice would be useful. In such examinations the finances are, of course, considered in detail, and this information is made use of in checking data previously given. If marked discrepancies are found, the patient is refused admission thereafter.

FINANCIAL RATING OF PATIENTS

"A"	yearly income from	0 to \$1,800	for single persons
"B"	yearly income from	\$1,800.00 to 3,000	for single persons
"C"	yearly income from	3,000.00 to 5,000	for single persons
"D"	yearly income from	5,000.00 and over	for single persons
"A"	yearly income from	0 to 2,500	for married persons
"B"	yearly income from	2,500.00 to 5,000	for married persons
"C"	yearly income from	5,000.00 to 10,000	for married persons
"D"	yearly income from	10,000.00 and over	for married persons

These are merely general guides, influenced by the number of dependents and the length of illness and also whether this illness has affected the family income. It is extremely difficult to set down any rigid rules covering such a classification, and the hospital has to depend very largely upon the judgment of those in charge of classifying. A great deal of literature has been published regarding budgets for individuals and families under varying circumstances, and there seems to be considerable variance of opinion, even among those who have given this field of study great attention. It is the policy of the hospital to have those who are classifying these patients acquainted with the social research in this field.

OUT-PATIENT DEPARTMENT

There are at the present time approximately 10,000 patients who register at the hospital, receive out-patient's care, but are not admitted to the institution and assigned beds. They constitute the out-patient department. They all pay a registration fee of \$2.00 (out of state patients \$3.00), and except for routine urine and blood examinations, they pay for laboratory and X-ray, but not for professional services if they are regarded as unable to pay for them. Even the poorest, however, pay 50 cents for each refer and a moderate professional fee is charged to a patient if it is thought he is able to meet it. B, C and D patients registering, but not admitted to the hospital, pay much higher rates for "extras" and professional fees in accordance with the service rendered and their ability to pay. An inquiry into the eligibility of out-patients is made at the time of registration, but with the large

number which apply, only a more or less superficial investigation has seemed possible. There can be no question whatsoever that many patients who would be paying a private physician for his services are registered and receive service for fees comparable with those of the outside profession. This service is similar to that of physicians in the surrounding communities who are in position to provide comparable attendance. At the present time, rather inadequate service is rendered these patients as compared with the high standards which obtain when the patient is actually admitted to the hospital. The clinic, in its operation, resembles that of many another large hospital, or the office of a too busy, overworked practitioner. A very decided effort is being made at the present time toward its betterment. Patients in this group are of comparatively little value for instructing students. It would seem that fewer patients, more leisurely and studiously worked up, would better serve the patient and the cause of teaching. Their eligibility is being more carefully scrutinized than ever before, but still leaves much to be desired. Your Committee is of the opinion that only such patients should be admitted to this service as are unable to pay a private physician; patients, in other words, whose meagre financial resources are such as to preclude their going to a doctor and paying him even a moderate fee. Your Committee commends the effort that is being made to be more strict, and suggests efforts in this direction should be made to a point where only strictly eligible patients are admitted. The use of information obtained from experts in social investigation would seem to be indispensable.

It would seem that a Social Investigation Department of a high order might be formed to supervise admissions in the out- and in-patient departments. The hospital has had practical experience in the matter and because of a university association they would be able to appreciate and employ persons of a superior intellectual character to organize and administer the department in an orderly, intelligent and just manner.

PATIENTS ADMITTED TO HOSPITAL GROUP I.

These patients are admitted from the various counties under direction of their Probate Courts.

The largest single group (average 9533 a year). These patients, under certain restrictions prescribed by law, are entitled

to University Hospital care. As pointed out last year, they constitute the "poor" of the state in its real sense, and your Committee is thoroughly in accord with the idea of their admission. It is for the state and counties on the one hand, and the University Hospital on the other, to settle questions as to this service. The counties are mainly interested in seeing that these patients have good medical and surgical attendance at a reasonable cost. The University is interested in giving them the best of hospital and professional care and also in their use as clinical material. There has been some complaint that at times they are kept in the hospital longer than is necessary, and Public Acts 1927, No. 317, to amend Act 267 of 1915 was passed to meet this contingency. It calls for a monthly report to the probate court which issues the order, stating the condition of the patient, the expense incurred, and limiting the financial liability of the county to six months, without a new order. It has been suggested that it would be an economy to the county if some of the patients were sent home for follow-up care when the Probate Court was in position to provide such. It might relieve hospital congestion, be more pleasing to patients, and encourage the Probate Courts to use the University Hospital with greater freedom. Proper adjustments of these and other difficulties that may arise would help to maintain this service as the principal source of teaching material.

As to possible abuse of this privilege by patients, it is obvious that there are but few patients able to pay for such medical service, who are willingly recipients of public charity. We believe that our Judges of Probate Courts, as a rule, constitute a very efficient barrier against abuses, though some reports to the contrary have come to us. In some instances, patients even pay the county small sums toward their care, which shows a commendable discrimination, for of course there are all degrees of poverty.

This group and Group II are, and may well be, the chief reliance of the medical school for purposes of instructing students. They are given a certain preference in admission, and are skillfully and humanely cared for. This, of course, we commend most highly. No investigation is made of their finances by the hospital in respect to their eligibility as court cases, nor would this seem necessary.

GROUP II.

County Patients: "Those patients who

are sent by the superintendent of the poor and whose hospital expenses are guaranteed by the county in which the patient resides." (Average 414 a year).

Our experience with county superintendents of the poor leads us to believe that eligibility for medical and surgical service is guarded with scrupulous care and that these patients are entitled to all they obtain.

GROUP III.

Students in attendance at the University of Michigan or the Michigan State Normal College of Ypsilanti. (Average 246 a year).

A small group. Your Committee has made no attempt to investigate this service more than to learn that its problems are large and complex. Should a study seem desirable, it should, we believe, be taken up by others, and we leave it as it is without comment.

GROUP IV.

"Persons bringing letters from their regular medical attendant, recommending their admission." (Patients in Group VI not included). Average 1947 a year. A large, and to us, very important group.

This is the first of the groups of so-called "pay-patients" on our list. As with Group V, they pay their hospital expenses, but not professional charges, except that in the "full time" departments small fees are required if it is thought they are able to meet them. Practically from the beginning of the University Hospital, say 50 years ago, it has been the custom for physicians to send patients there for care. This has been a benefit to patients, a distinct advantage to the individual doctor, and has supplied a considerable amount of teaching material for the medical school. It has been of special value to patients and physicians living in counties of the state not well supplied with facilities for diagnosis and treatment, a condition which still exists, although not to the same degree as formerly. The habit of sending patients to Ann Arbor is not easily modified. Many medical men regard it as a right rather than a privilege, and are reluctant to relinquish it. It forms today perhaps the principal connection between the Medical School and the profession of the state. The former has cherished this affiliation, not only because it has furnished material, but because it has helped to meet its responsibility to the physician after graduation, and has laid a founda-

tion for enlarging its scope in this direction. If the patients sent and received were strictly unable to pay more than their hospital expenses, your Committee would have no comment to make except to endorse the practice. It is perfectly apparent, however, that in the past there have been many abuses. The Hospital has shown a most commendable effort to limit them, and such patients are investigated with increasing care as to their finances. It is evident that striving in this direction must, and we learn does, meet with considerable unpleasantness. It is well to point out that the hospital here is dealing with individual doctors and not with the profession as a whole. Your Committee believes that the medical men of the state, as a body, will heartily endorse every effort on the part of the hospital to limit this service to those who are really unable to pay the doctor at home, or elsewhere, for the particular service which is contemplated. We have no desire to limit the number of patients in this group. Quite the contrary. We believe that its numbers will be increased if the profession, as a whole, feel that their admission and those of Group V are being more and more strictly guarded and that losses of income from this source are being gradually reduced.

GROUP V.

"Patients who can truthfully sign an affidavit that they are unable to pay the usual minimum fee charged by the medical profession outside the Hospital." (Average 3381 a year).

A very large group, nearly double the size of the previous one, similar in many respects to it and constituting with it nearly 19 per cent of total admissions. The two groups together provide at present the best teaching material that the medical school possesses, since these patients, as a whole, represent less advanced pathological conditions and rather greater intelligence than those of Groups I and II. The two together constitute under the present "self-supporting" plan of financing (see last year's report) an indispensable source of income to the Hospital.

It has long been the custom of the Hospital to receive patients of the "A" class who would sign an affidavit to the effect that they are unable to pay the minimum fees of outside physicians. In previous years there can be no doubt that many did so who might well pay at least a moderate professional fee in addition to the hospital charges. There has been, and is now,

a real effort being made to scan the finances of these prospective patients and to refuse their admission if it is thought they are not worthy of this charity. Your Committee realizes the difficulty in bringing about such a change. It requires a gradual shift of viewpoint on the part of all those who are concerned in their admission, a quiet determination and a persistent, but discriminating effort to carry out the program. Those really entitled to admission must not be eliminated. The Hospital must be commended for its efforts in this direction. People all over the state have grown to regard the University Hospital service as their prerogative rather than a privilege entirely within the discretion and control of the Hospital. It is primarily a teaching institution and as a matter of fact, the people have no more right to demand admission to it for their private and personal medical care than they have to call upon the State Legal Department for professional services in connection with their private legal problems, or to use public grounds and buildings for their personal projects. There are several deterrents, however, preventing too great abuses—a hesitation about submitting to the delays, lack of privacy, and inconveniences of such a great public institution, a desire to employ their private physician and a hesitation about being used for clinical teaching. These are by no means powerful enough, however, to prevent many from obtaining skillful service at a low cost if they can do so. They may easily be persuaded that they are fully entitled to it. Some are of European origin, where such service is often regarded as a legitimate right. It is not American. With the assumption of American opportunities and far greater emoluments from their work, they should also assume American responsibilities.

In the last analysis, the responsibility in admission of patients to this group and Group IV rests with the President of the University and the Board of Regents. They might be helped to a satisfactory solution of the problem if a greater insistence were made on reference from practitioners of regular medicine. The use of data obtained from expert social workers would, it seems to us, be an absolute essential.

There are a number of interests particularly to be considered in this and Group IV—the people from the standpoint of broad benevolence and social economy—the University from the teaching standpoint—the hospital and its desire to render good service to patients, and to satisfy

its sometimes conflicting elements, and a self-respecting, upstanding profession anxious to fulfill its obligations to the public and to protect its own integrity. We must not expect things impossible of perfect adjustment, nor be too impatient if betterment comes by degrees and not in a day.

GROUP VI.

"Patients who are able to pay, in addition to their hospital charges, fees for professional services, and are admitted to the services of medicine, surgery or X-ray." (Average, 684 a year).

A group rather recently added (about seven years ago); not large, but one involving some very important questions.

The teaching policies of our American medical schools are being constantly and seriously discussed and are ever in a state of unrest and experiment, with always a striving for better medical instruction. Among other things, there has been the question of "full time" professorships, and it apparently remains unsettled, though showing signs of an early passing. We are concerned only with this practice as it affects our own University. It was adopted by the Board of Regents as a measure worthy of trial for the departments enumerated above. There were difficulties in the way of the medical school or hospital assuming the considerable extra burden made necessary by the increased salaries of all giving full time service, and as an expedient the plan was adopted to receive patients who were frankly able to pay for professional attendance and to charge them a commensurate fee, the same being regulated, as with private physicians, by their ability to pay. The greater part of the sum thus obtained is applied to the purpose of meeting the required extra salaries of physicians in the departments mentioned, and, as pointed out last year, a part of the salary of a needed assistant in Neurology. We find that the budget of 1928-9, for the salaries of clinical teachers to be paid by the medical school, is \$184,040, and by the Hospital \$60,850. Practically 25 per cent of the total amount devoted to all of such professional salaries is derived from private patients. The comparative isolation of this group in private rooms makes their general use as clinical material somewhat difficult. They are under the supervision of the various staffs and internes exactly as all other groups, and are available for teaching purposes. The extent to which these patients are used for student teaching is dependent

upon the interest which their cases present and is entirely controlled by those in charge. As a matter of fact, as pointed out last year, their value as clinical material is negligible. The main reason for accepting them is plainly one of income. The argument that has been advanced that they provide a certain cultural atmosphere for men about to enter practice, and that the outstanding men of the faculty who are giving "full time" derive satisfaction from their contact, seems to us of little importance in weighing evidence for and against this practice. One other argument for it seems worthy of mention—namely, that if these men now on "full time" were to be placed on "part time," allowing them to conduct a private practice, they would be in direct and able competition with the rest of the profession. Medical men outside accept competition from their fellows as a matter of course, and are undoubtedly stimulated to better effort thereby. The life of every man and his period of activity is limited. He must struggle like others to acquire a foothold and to maintain it, and the force of his competition is limited, and this is true whether he be connected with an institution like the University or not. The "part time" men at Ann Arbor who are thus in competition with us offer us no particular concern. On the other hand, great pleasure and benefit has resulted from the association with men who have at once combined the dual function of teacher and practitioner. The matter puts on an entirely different aspect in the case of a state institution that is conducting a private practice.

The essential things in the head of a clinical department are that he should be able to give personal instruction himself, and to instill into his students and staff a keen scientific interest in the work and a kindly human attitude toward patients; also to administer his department in an orderly manner and to lead the way in scientific investigation for those who are of an inquiring turn of mind. It seems to us essential that a teacher should have had, and usually should maintain, contact with patients in actual private practice. The last cannot find its best expression in the "full time" plan. Experience seems to demonstrate that the question of "full time" is not the essential element—it is the individual. It has not worked out satisfactorily at Ann Arbor, and many of those who were in favor of it before its adoption are now lukewarm or opposed to it at least in its present form.

If the plan, or any modification of it, is

to be continued, we at least believe that it should not be supported on the present basis. This is "State Medicine" for the sake of education, but nevertheless "State Medicine," and there seems to be no sufficient reason for it.

If the University Medical School and Hospital, to which we look for the highest standards, not only in scientific medicine, but as well in medical social ethics, are receptive to such practice, into what depths of unsoundness may not the rest of us be induced to dip? We suggest that very serious consideration be given to the question of this practice, and that it be annulled, if not at once, at least gradually.

GROUP VII.

"Doctors and members of their families, nurses, hospital staff and employes." (Average, 695 a year).

This group calls for but little comment. Professional courtesy dictates that physicians and their immediate dependents receive the service of other physicians without charge—there is no conflict with the interests of the outside medical men. They pay their hospital expenses and are thus no burden to it.

Nurses, hospital staff and employes are treated here as in all hospitals—a custom showing a fine professional spirit.

GROUP VIII.

"Emergency patients." (Average, 877 a year).

Patients entering the hospital voluntarily, without medical reference or public guarantee. A group concerning which we have but little to add to what was said last year. Patients in acute distress and danger that come to the door of any hospital must, as a matter of ordinary benevolence, be received and cared for. The automobile accounts perhaps for the small increase in the figures of this year over those of last.

CONCLUSION

In presenting its report of last year the committee believes it has helped to clear away much misinformation in regard to the University Hospital and has succeeded in creating a greater sympathy with its purposes. It hopes that this report will be still more helpful in attaining these objects and in furthering that friendly spirit of co-operation so essential to the best interests of medical school, hospital and private physicians in the pursuit of their common aims.

We are looking forward to that time when the University Medical School will not only be sending out into the state well fitted young men to practice, as at present, but will be taking a large and important part in the post-graduate instruction of him who is now serving the public in a most important capacity, so that throughout his life of practice he will be kept in constant touch with its educational

advantages. What is already being done in this direction we welcome most heartily.

Respectfully submitted,

R. R. Smith, *Chairman*,
J. Walter Vaughan,
W. H. Marshall.

Report adopted and recommendations concurred in by the House of Delegates, September 26, 1928.

F. C. Warnshuis, *Secretary*.

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